

Inventory and Analysis of Select Archaeological Collections from the U.S. Fish and Wildlife Service, Southeast Region



Archaeological Curation-Needs Assessment
Technical Report No. 13



U.S. Army Corps of Engineers
St. Louis District

Mandatory Center of Expertise for the
Curation and Management of Archaeological Collections



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by
Charles M. Slaymaker

with contributions by
Charles S. McSween

**Michael K. Trimble and
Christopher B. Pulliam**
Series Editors

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U.S. Fish and Wildlife Service
Southeast Region
1875 Century Boulevard
Atlanta, GA 30345

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U.S. Army Corps of Engineers, St. Louis District
Mandatory Center of Expertise for the Curation
and Management of Archaeological Collections

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Contents

List of Figures	v
List of Tables	vii
Executive Summary	ix
Problem	ix
Background	ix
Findings	xi
Summary	xii
Recommendations	xiv
1. Introduction	1
2. Methods	3
Examination of State Site Files and Bibliography	3
Field Inspection and Assessments of Repositories and Collections	3
NAGPRA-Compliance Assessment	4
Report Preparation	4
Synopsis	4
3. Arkansas Archeological Survey Station, Southern Arkansas University, Magnolia	5
Assessment of Graham Hall, Room 302	5
Assessment of Magale Library, Room 116	11
Assessment of Collections-Management Standards for Both Repositories	15
Comments	16
Recommendations	16
4. Charles H. Nash Museum of Archaeology, Memphis, Tennessee	19
Assessment	19
Comments	25
Recommendations	26
5. Division of Archaeology Headquarters, Tennessee Department of Conservation, Nashville, Tennessee	27
Assessment	27
Comments	31
Recommendations	31

6. Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area	33
Assessment	34
Comments	41
Recommendations	41
 7. Office of Archaeological Services, University of Alabama Museums, Moundville, Alabama	 43
Assessment of the Erskine Ramsay Archaeological Repository	44
Assessment of the David L. DeJarnette Laboratory of Archaeology	48
Assessment of Both Repositories	50
Comments	52
Recommendations	52
 8. Summary	 55
Infrastructure Controls	55
Artifact Curation	57
Human Skeletal Remains	57
Records Management	57
Collections-Management Standards	57
 9. General Recommendations	 59
Develop a Plan of Action	59
Bring Collections Together	59
Develop Cooperative Agreements	59
Dedicate Space for Storage of Collections	59
Maintain Systems for Security, Fire Detection and Suppression, and Maintenance	60
Inventory and Rehabilitate Existing Artifact Collections	60
Develop a Formal Archives-Management Program	60
Hire a Full-Time Manager for Archaeological Collections	61
Specific Recommendations for the U.S. Fish and Wildlife Service, Southeast Region	61

List of Figures

Figure 1. Exterior of Graham Hall, facing south	7
Figure 2. View of shelving unit, Graham Hall, Room 302	9
Figure 3. Closeup view of primary containers on the first shelving unit	10
Figure 4. Contents of Box 40, illustrating primary and secondary containers	10
Figure 5. Front exterior of Magale Library, facing north	11
Figure 6. Exterior loading-dock area of Magale Library, facing southwest	12
Figure 7. Primary containers holding U.S. Fish and Wildlife Service documentation, Magale Library, Room 116	13
Figure 8. U.S. Fish and Wildlife Service paper records, Magale Library, Room 116	14
Figure 9. Exterior, Charles H. Nash Museum of Archaeology	20
Figure 10. Collections storage area, Charles H. Nash Museum of Archaeology	22
Figure 11. Primary and secondary containers, collections storage area, Charles H. Nash Museum of Archaeology	22
Figure 12. Records storage area, Charles H. Nash Museum of Archaeology	24
Figure 13. Exterior, Division of Archaeology Headquarters	28
Figure 14. Collections storage area, showing primary containers holding U.S. Fish and Wildlife Service materials, Division of Archaeology Headquarters	30
Figure 15. Main entrance, Central Curation Facility, Division of Archaeology	34
Figure 16. Laboratory area with asbestos counter tops, Central Curation Facility, Division of Archaeology	35
Figure 17. Collections Storage Area 1, showing primary containers holding U.S. Fish and Wildlife Service materials, Central Curation Facility, Division of Archaeology	36
Figure 18. Primary and secondary containers holding U.S. Fish and Wildlife Service materials, Central Curation Facility, Division of Archaeology	36
Figure 19. Ceramic vessel from the U.S. Fish and Wildlife Service collections, Central Curation Facility, Division of Archaeology	38
Figure 20. Records storage area, Central Curation Facility, Division of Archaeology	39
Figure 21. Paper and photographic records associated with U.S. Fish and Wildlife Service collections, Central Curation Facility, Division of Archaeology	40

Figure 22. Exterior, Erskine Ramsay Archaeological Repository, David L. DeJarnette Archaeological Research Center	46
Figure 23. Primary containers holding U.S. Fish and Wildlife Service materials, Erskine Ramsay Archaeological Repository, David L. DeJarnette Archaeological Research Center	48

List of Tables

Table 1. Summary of Select Repositories Curating Archaeological Collections and Associated Documentation for the U.S. Fish and Wildlife Service, Southeast Region	xiii
Table 2. Summary of Felsenthal NWR Collections at the Arkansas Archeological Survey Station	6
Table 3. Summary of Associated Documentation at the Arkansas Archeological Survey Station	14
Table 4. Summary of Hatchie NWR Collections at the Charles H. Nash Museum of Archaeology	23
Table 5. Summary of Archaeological Collections at Division of Archaeology Headquarters	30
Table 6. Summary of Archaeological Collections at the Central Curation Facility, Division of Archaeology	37
Table 7. Summary of Material Classes at the Central Curation Facility, Division of Archaeology, by Percentage	38
Table 8. Summary of Associated Documentation at the Central Curation Facility, Division of Archaeology	39
Table 9. Summary of Material Classes at the David L. DeJarnette Archaeological Research Center, by Percentage	44
Table 10. Summary of Archaeological Collections at the David L. DeJarnette Archaeological Research Center	45
Table 11. Summary of Associated Documentation at the David L. DeJarnette Archaeological Research Center	50
Table 12. Summary of Collections by Location	55
Table 13. Presence or Absence of Repository Infrastructure Controls	56

Executive Summary

Problem

Federal archaeological collections are an important and nonrenewable cultural resource. Curation of these materials, however, has been substandard for 50 years or more. The result has been a progressive deterioration of these resources, which include many unique prehistoric and historical objects. Many of these irreplaceable collections of materials related to our national heritage have been ignored in hundreds of storage facilities across the country. The lack of adequate curation of these collections violates federal law and prevents their use for educational and scientific purposes. Many collections have disappeared and the significant investment by the American people in archaeological recovery squandered. Nonetheless, a significant portion of these invaluable national cultural resources remain. Proper care and curation can ensure that these nonrenewable resources are preserved for future generations.

Background

Federal agencies are responsible for the management of archaeological collections and historical resources that are located on or recovered from their properties. Federal laws and regulations require agencies to ensure that archaeological materials and their associated records are properly curated in perpetuity. Compliance with P.L. 101-601 (the Native American Graves Protection and Repatriation Act [NAGPRA]) and 36 CFR Part 79 (Curation of Federally-Owned and Administered Archaeological Collections) requires federal agencies to (1) locate all collections recovered from their properties, (2) assess the size of these collections and the nature of recovered materials, and (3) evaluate the work necessary to ensure that these collections are curated according to established curation standards. NAGPRA was enacted in 1990 to identify federal holdings of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, and to reach agreements with Indian Tribes and Native Hawaiian organizations on the repatriation or disposition of these remains and objects.

In order to comply with these legal requirements and respond to a directive from the Department of the Interior to inventory archaeological collections housed in non-Service-managed facilities, a multi-phase archaeological collections-assessment plan was devised by the U.S. Fish and Wildlife Service, Southeast Region. The plan was incorporated in Interagency Agreement No. 14-16-0004-92-969 between the U.S. Fish and Wildlife Service, Southeast Region, and the U.S. Army Corps of Engineers, St. Louis District. This plan consists of the following parts:

1. Update a bibliography of known archaeological investigations conducted on Service lands by obtaining information from state historic preservation and state archaeologist offices and incorporating this information in a master bibliography.
2. Inspect and inventory archaeological collections in select repositories in the Southeast.
3. Provide a summary of all unassociated funerary objects, sacred objects, and objects of cultural patrimony.
4. Provide a general inventory of all skeletal remains, associated funerary objects, and geographical and cultural affiliation (time period) of the remains and objects. The inventory also should contain a breakdown of other classes of archaeological materials. The inventory should describe the internal reference system of each repository to locate the collections and provide information concerning the sites, projects, excavators, institutional affiliations, and dates.

The large numbers of collections and reports relating to Service refuges called for alterations of the plan, now referred to as Modifications 1–4 of the Interagency Agreement. As a result of these modifications, St. Louis District personnel continued development of the Service-specific database and performed curation-needs assessments of collections curated at the following repositories.

1. Arkansas Archeological Survey Station, Magnolia
2. Charles H. Nash Museum of Archaeology, Memphis, Tennessee
3. Division of Archaeology Headquarters, Tennessee Department of Conservation, Nashville
4. Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area
5. David L. DeJarnette Archaeological Research Center, Office of Archaeological Services, University of Alabama Museums, Moundville

Findings

Arkansas Archeological Survey Station, Magnolia

One collection from Felsenthal National Wildlife Refuge (NWR) was physically examined at the Arkansas Archeological Survey Station in Magnolia. Personnel from the St. Louis District examined and assessed the conditions of approximately 102 ft³ of cultural materials and 5 linear feet of associated documentation. NAGPRA-related materials identified included human remains from 13 individuals.

Charles H. Nash Museum of Archaeology

One collection from Hatchie NWR was physically examined at the Charles H. Nash Museum of Archaeology. Personnel from the St. Louis District examined and assessed the conditions of approximately 7 ft³ of cultural materials and 0.25 linear feet of associated documentation. No NAGPRA-related materials were identified.

Division of Archaeology Headquarters, Tennessee Department of Conservation

One collection from the Tennessee NWR was physically examined at the Division of Archaeology Headquarters, Tennessee Department of Conservation. Personnel from the St. Louis District examined and assessed approximately 11.28 ft³ of cultural materials and 0.79 linear feet of associated documentation. No NAGPRA-related materials were identified.

Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum

Eight collections from the following National Wildlife Refuges were physically examined at the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum. The refuges include the following.

1. Chickasaw NWR, Tennessee
2. Hatchie NWR, Tennessee
3. Lower Hatchie NWR, Tennessee
4. Tennessee NWR, National Migratory Wildlife Unit

5. Tennessee NWR, Big Sandy Unit
6. Tennessee NWR, Busseltown Unit
7. Tennessee NWR, Cross Creeks Unit
8. Tennessee NWR, Duck River Unit

Personnel from the St. Louis District examined and assessed the conditions of approximately 41 ft³ of cultural materials and slightly less than 1 (0.9) linear foot of associated documentation. NAGPRA-related materials included human remains from two individuals and associated funerary items from one individual.

David L. DeJarnette
Archaeological Research Center,
Office of Archaeological Services,
University of Alabama Museums, Moundville

Ten collections from the following National Wildlife Refuges were physically examined at the Alabama State Museum of Natural History.

1. Alligator River NWR, North Carolina
2. Banks Lake NWR, Georgia
3. Choctaw NWR, Alabama
4. Harris Neck NWR, Georgia
5. Noxubee NWR, Mississippi
6. Pee Dee NWR, North Carolina
7. Pelican Island NWR, Florida
8. Pinckney Island NWR, South Carolina
9. St. Marks NWR, Florida
10. Wheeler NWR, Alabama

St. Louis District personnel examined and assessed the conditions of approximately 34 ft³ of cultural materials and 1.81 linear feet of associated documentation. No NAGPRA-related materials were identified.

Summary

During the curation-needs assessment of the Service's archaeological collections from the Southeast Region, 195.97 ft³ of collections and 8.77 linear feet of associated documentation were examined at five repositories (Table 1). This report summarizes the Service's limited holdings in this region.

At these repositories, collections and associated documentation were examined from 15 Service refuges in the Southeast Region. Additional cultural materials and documentation from other refuges exist at other repositories, but examination of these was not within the present scope of work.

Table 1.
Summary of Select Repositories Curating Archaeological Collections and Associated Documentation for the U.S. Fish and Wildlife Service, Southeast Region

Refuge	Repository	Volume of Collections (ft ³)	Documentation (linear feet)
Alligator River	Moundville ^a	1	0.01 ^b
Banks Lake	Moundville	1	0.20 ^b
Chickasaw	TDOA, Pinson ^c	4	0.17
Choctaw	Moundville	1	—
Felsenthal	AASSM ^d	102	5.00
Hatchie	Nash Museum ^e	7.44	0.25
	TDOA, Pinson	1	—
Harris Neck	Moundville	9.25	0.70 ^b
Lower Hatchie	TDOA, Pinson	22	0.44
Noxubee	Moundville	1	—
Pee Dee	Moundville	4	0.50 ^b
Pelican Island	Moundville	3.5	0.40 ^b
Pinckney Island	Moundville	8	—
St. Marks	Moundville	0.5	—
Tennessee			
National Migratory Wildlife Unit	TDOA, Nashville ^f	11.28	0.79
	TDOA, Pinson	6	0.12
Big Sandy Unit	TDOA, Pinson	2	—
Busseltown Unit	TDOA, Pinson	1	—
Cross Creeks Unit	TDOA, Pinson	3	0.19
Duck River Unit	TDOA, Pinson	2	—
Wheeler	Moundville ^g	5	—
Total		195.97	8.77

^aDavid L. DeJarnette Archaeological Research Center, Office of Archaeological Services.

^bThere is additional unprocessed photographic documentation located at this repository.

^cCentral Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

^dArkansas Archeological Survey Station, Magnolia.

^eCharles H. Nash Museum, Memphis.

^fDivision of Archaeology Headquarters, Tennessee Department of Conservation, Nashville.

^gOwnership of these materials is disputed.

Recommendations

Based on the results of this curation-needs assessment and materials contained in the bibliographic database, the St. Louis District recommends the following initial actions:

1. Bring together all collections and associated documentation at the designated repository for the Service's collections in the Southeast Region (the most likely repository is the David L. DeJarnette Archaeological Research Center, Office of Archaeological Services, University of Alabama Museums, Moundville).
2. Obtain copies of all archaeological reports, manuscripts, and other documentation and curate them at Moundville.
3. Retain acid-free copies of all reports, manuscripts, and other documentation at the Office of the Regional Archaeologist.
4. Curate an acid-free copy of the database and machine-readable records at Moundville and the Office of the Regional Archaeologist.
5. Determine ownership of the Wheeler NWR archaeological collections.
6. Determine the specific locations of all collections identified by the database, but which were not examined during this curation-needs assessment.

In order to comply with the mandates of NAGPRA and 36 CFR Part 79, the St. Louis District recommends that the following general actions be taken:

1. Determine the specific locations of all collections identified by the database, specifically identifying collections with NAGPRA-related materials.
2. Physically assess all collections in order to address the requirements of 36 CFR Part 79 and to locate any NAGPRA-related materials not identified during the literature-review process.
3. Perform NAGPRA Section 5 inventory of all relevant materials and obtain copies of summaries and inventories already performed by the repositories enumerated here.

If implemented, these general recommendations would permit the Service to address the federal requirements for the long-term curation of archaeological materials. By adopting this strategy, the Service has the opportunity to implement a curation program that will serve its needs well into the future.

Introduction

The Southeast Region of the U.S. Fish and Wildlife Service is responsible for archaeological artifact collections and accompanying documentation (hereafter referred to as archaeological collections) recovered from refuges in nine states and Puerto Rico and the Virgin Islands. This responsibility is mandated through numerous legislative enactments, including the Antiquities Act of 1960 (P.L. 59-209), the Historic Sites Act of 1935 (P.L. 74-74-292), the Reservoir Salvage Act of 1960 (P.L. 86-523), the National Historic Preservation Act of 1966 (P.L. 89-665), and the Archaeological Resources Protection Act of 1979 (P.L. 96-95). Executive Order 11593 (U.S. Code 1971) and amendments to the National Historic Preservation Act in 1980 provide additional protection for these resources. The implementing regulation for securing the preservation of archaeological collections is 36 CFR Part 79, Curation of Federally-Owned and Administered Archaeological Collections.

In 1990, the Native American Graves Protection and Repatriation Act (P.L. 101-601; NAGPRA) was enacted to identify federal holdings of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony, and to reach agreements with Indian Tribes and Native Hawaiian organizations on the repatriation or disposition of these remains and objects. All federal agencies are required to meet mandated deadlines for compliance with P.L. 101-601. A summary of unassociated funerary objects, sacred objects, and objects of cultural patrimony was to be completed by November 16, 1993. In addition, an inventory of

human remains and associated funerary objects was to be completed by November 15, 1995.

In 1992, the U.S. Fish and Wildlife Service, Southeast Region, contacted the U.S. Army Corps of Engineers, St. Louis District, to discuss a means for addressing the requirements of 36 CFR Part 79 and NAGPRA.

After consultation with the St. Louis District, the Service devised a plan to survey its archaeological collections. The plan was incorporated into an interagency agreement. This plan consisted of the following parts (see Executive Summary for more detailed description): (1) update a bibliography of known archaeological investigations conducted on Service lands in the Southeast Region; (2) inspect and inventory archaeological collections in select repositories in the Southeast; (3) provide a summary of all unassociated funerary objects, sacred objects, and objects of cultural patrimony; and (4) provide an inventory of all skeletal remains and associated funerary objects, and geographical and cultural affiliation or time period of the remains and objects.

As a result of the large numbers of collections and reports relating to refuges in the Southeast Region, this plan was modified. The modifications required St. Louis District personnel to perform the following three tasks: (1) continue development of a Service-specific database, (2) examine site-survey records at the Alabama and Tennessee state site files, and (3) assess the curation needs of collections curated at the following repositories:

- Arkansas Archeological Survey Station, Magnolia;

- Charles H. Nash Museum of Archaeology, Memphis;
- Division of Archaeology Headquarters, Tennessee Department of Conservation, Nashville;
- Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum; and
- David L. DeJarnette Archaeological Research Center, Office of Archaeological Services, University of Alabama Museums, Moundville.

Methods

Numerous archaeological investigations have been conducted at U.S. Fish and Wildlife Service refuges in the Southeast Region over the last 40 years. The collections generated by these investigations have been curated at various repositories, usually chosen at the discretion of the researchers. Often, contractors, rather than Service archaeologists, have determined the provisions of the long-term care afforded the collections; consequently, to identify all collections and their probable locations, it is necessary to reconstruct all previous investigations on the properties.

Bibliographic research by St. Louis District personnel followed established procedures. Personnel examined the Alabama state archaeological site files located at the Office of Archaeological Services, Moundville, between October 25 and 28, 1994, and the Tennessee state archaeological site files located at the Division of Archaeology Headquarters, Tennessee Department of Conservation, on November 2, 1994. Information on archaeological sites located on Service refuges in the Southeast Region was added to the bibliography created earlier in this project.

St. Louis District personnel assessed curation needs using established procedures, and examined collections at repositories curating Service collections for the Southeast Region according to the following schedule:

- October 25–28, 1994: DeJarnette Archaeological Research Center
- November 2, 1994: Division of Archaeology Headquarters, Tennessee Department of Conservation

- January 10–11, 1995: Charles H. Nash Museum
- January 12, 1995: Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum
- February 7–8, 1995: Arkansas Archeological Survey Station, Magnolia

Examination of State Site Files and Bibliography

The annotated bibliography database was created by visits to the Service's Atlanta headquarters and by examinations of state site files and files at refuges and repositories. The format of the database is tailored to the needs of the U.S. Fish and Wildlife Service in the Southeast Region, and it enables the Service to assess the overall extent of its collections and documentation. It also provides an important first step in determining the extent of the Service's responsibility under NAGPRA (P.L. 101-601).

Field Inspection and Assessments of Repositories and Collections

A survey questionnaire, requesting information on repositories, collections, and associated documentation, was completed for each repository curating archaeological collections for the Service. A building-evaluation form, assessing

structural adequacy, space utilization, environmental controls, security, fire detection and suppression, pest management, and utilities was completed for each repository curating archaeological collections for the Service. These data, collected through discussion and observation, enabled an assessment of the repositories vis-à-vis 36 CFR Part 79.

An inspection of all associated documentation was made to determine presence or absence by project, total linear feet by type of documentation, present physical condition of the documentation and their containers, and nature of the curation environment. Types of associated documentation examined included project and site reports; administrative files; field, analysis, and curation records; electronic media; and photographic records. This inspection enabled a determination of each repository's compliance with the archives-management requirements of 36 CFR Part 79.

Artifact collections were examined and evaluated in terms of primary and secondary containers, container labeling, laboratory processing, material classes present in the collections, and the presence or absence of NAGPRA-related items. Primary containers enclosing one artifact or a group of artifacts include archive boxes and cardboard trays. Secondary containers are those directly inside the primary container and include plastic and paper bags, cardboard boxes, aluminum foil, glass jars, film canisters, and pill vials.

NAGPRA-Compliance Assessment

NAGPRA-related remains and artifacts discovered during inspection of site files, reports, collections, and associated documentation are noted in the following report and the bibliography database. Repositories should be contacted for copies of NAGPRA summaries and inventories because many NAGPRA items had been removed from the collections prior to this investigation.

Report Preparation

A detailed written report concerning the results of the curation-needs assessment is a requirement of the interagency agreement between the St. Louis District and the Service. This report includes estimates of the nature, size, and condition of each collection in addition to repository descriptions.

The report includes recommendations concerning the conditions and rehabilitation of the collections and associated documentation in terms of 36 CFR Part 79.

Synopsis

Chapters 2–6 document the conditions of select archaeological collections for which the Southeast Region is responsible and provide information on the repositories curating these collections. Each chapter focuses on a single repository and contains a repository summary, a detailed evaluation of each repository and its collections, and recommendations for the improvement of the collections and repository. Detailed tables complement each chapter.

Only one repository—the University of Alabama—fulfills all of the standards mandated by 36 CFR Part 79 for curating federally owned archaeological collections. Many collections and groups of associated documentation require rehabilitation to meet federal standards. All repositories employ full-time curators for archaeological collections, but lack adequate funding and personnel to rehabilitate collections and documentation.

Other federal agencies and repositories throughout the United States are experiencing similar problems. A national policy is needed to address funding, personnel, and management programs before collections and documentation deteriorate beyond their research and educational potential. The Southeast Region of the U.S. Fish and Wildlife Service has initiated an important first step toward rehabilitating its irreplaceable resources.

Arkansas Archeological Survey Station

Southern Arkansas University, Magnolia

Repository Summary

Volume of Artifact Collections: 102 ft³

Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 5 linear feet

Compliance Status: All records should be rehabilitated to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: Skeletal remains from approximately 13 individuals recovered

from U.S. Fish and Wildlife projects are curated at Southern Arkansas University. These will be moved immediately to survey headquarters in Fayetteville, Arkansas.

Status of Curation Funding: Curation funding, as currently provided by Southern Arkansas University and the Arkansas Archeological Survey, is inadequate. There are plans to move the collections and documentation to a central facility in the near future.

Date of Visit: February 7–8, 1995

Point of Contact: Dr. Frank Schambach, Director

The Arkansas Archeological Survey Station, Magnolia, is located at Southern Arkansas University. The director is Professor of Anthropology Dr. Frank Schambach. The university provides curation and office space for the survey station, but all survey activities are funded by the main survey office in Fayetteville. Collections belonging to the Southeast Region of the U.S. Fish and Wildlife Service (Table 2) are curated in one room of the survey storage facility in Graham Hall. Associated archaeological documentation is curated in a basement room of the Magale Library. Archaeological collections and associated documentation curated at Southern

Arkansas University for the Service's Southeast Region are limited to materials from Felsenthal NWR.

Assessment of Graham Hall, Room 302

Graham Hall is located on the Southern Arkansas University campus in Magnolia. The building is a three-story, 19,008-ft² structure originally used as a student dormitory (Figure 1). The building is vacant except for offices and rest rooms on the first floor and the repository on the third floor.

Table 2.
Summary of Felsenthal NWR Collections at the
Arkansas Archeological Survey Station

Box Number ^a	Site Number	MNI ^b (Catalog Number)	Box Number ^a	Site Number	MNI ^b (Catalog Number)
1	3UN80	—	36	3UN53, -63, -68, -70-72, -79, -81, -83, -86-87, -93	1 (71-693, -743)
2	3UN13, -37, -52, -55, -58-59, -62-66, -95-96, -132	—	37	3UN18, -22	1 (71-687)
3	3UN38, -62, -99, 116-120	—	38	3BR19; 3UN8, -19, -52, -75, -840	—
4	3UN14, -99, -102	2 (77-683-1, 73-119)	39	3UN73, -75, -84	1 (71-689-1, -2)
5	3UN36	—	40	"Felsenthal"	1 (68-621)
6	3UN9, -23, -58, -98, -140, -146	—	41	3BR10; 3UN18	1 (73-217-58)
7	3UN52	—			
8	3UN52	—			
9	3UN52	—	42	3UN8, -18, -52, -75	—
10	3UN52	—	43	3UN8, -18, -52	—
11	3UN52	—	44	3UN8	—
12	3UN52	—	45	3UN8	—
13	3UN52	—	46	3UN8	—
14	3UN52	—	47	3UN18	—
15	3UN52	—	48	3UN18, -84	—
16	3UN52	2 (72-531-50)	49	3UN18	—
			50	3UN18	1 (72-535-7, -79)
17	"Felsenthal"	—			
18	3UN52	—	51	3CA18; 3LR87; 3OU158, -207; 3UN232	—
19	3UN52	—	52	3UN53	—
20	3UN52	—	53	3UN53	—
21	3UN52	—	54	3UN72, -99, -130, -143	—
22	3UN52	—	55	3UN23	—
23	3UN52	—	56	3UN34	—
24	3UN52	—	57	3UN81	—
25	3UN52	—	58	3UN81	—
26	3UN52	—	59	3UN81	—
27	3UN52	—	60	3UN23	—
28	3UN52	—	61	3UN192, -193	—
29	3UN52	—	62	3UN23, -34	2 (81-1191, -1192)
30	"Felsenthal Region"	—			
31	3UN52	—	63	"Felsenthal Region"	—
32	3UN52	—	64	"Felsenthal Region"	—
33	3UN52	—	65	3UN122	—
34	3AS160, -163, -165, -177; 3BR8; 3DE14A, -B; 3UN9E, -52B	—	66	3UN151-152, -154, 156-160	—
35	3AS160, -165; 3BR4, -8; 3UN63	—	67	3UN220-223	—

continued on next page

Box Number ^a	Site Number	MNI ^b (Catalog Number)	Box Number ^a	Site Number	MNI ^b (Catalog Number)
68	3UN223	—	84	3UN8	—
69	3UN223-225	—	85	3UN8	—
70	3UN18, -34, -72, -140, -152, -156-157, -160, -210-211, -216, -226-228	—	86	3UN8, -18, -52	—
71	3UN75	—	87	3UN9/52, -213, -219	—
72	3UN84	—	88	3UN19, -34, -81	—
73	3UN75	1 (71-911-1)	89	3UN9/52	—
74	3UN75	—	90	3UN9/52	—
75	3UN75	—	91	3UN85, -192-193, -214-215, -217	—
76	3UN18	—	92	3UN52	—
77	3UN18	—	93	3UN52	—
78	3UN18	—	94	3UN9/52, -34, -92, -138, -172-175, -177, -179-184, -186-187	—
79	3UN18	—	95	3UN88, -123, -132, -161-171, -173	—
80	3UN8	—	96	3UN81, -121-122, -160, -178, -180	—
81	3UN8	—	97	3UN122, -168, -179-180	—
82	3UN8	—			
83	3UN8	—			

^a Box numbers assigned by St. Louis District personnel for field-analysis purposes.

^b MNI = minimum number of individuals.



Figure 1. Exterior of Graham Hall, facing south.

Structural Adequacy

Graham Hall was constructed in the 1950s and was used as a dormitory until approximately 10 years ago. This three-story building has a concrete slab foundation, reinforced concrete-block exterior walls, and a built-up asphalt roof. The roof had leakage problems in the past, but the inspection team was informed that they have been corrected. Interior walls are constructed of plywood, and floors are poured concrete covered with asphalt tile. The ceilings are constructed of plasterboard.

Each floor consists of two groups of dormitory rooms and one bathroom along each exterior wall of the building with a hallway down the center. There is one stairwell at the northern end of the building and another two-thirds of the way along the building to the south. Stairwells are separated from each group of rooms by interior steel doors. The exterior walls of the northern stairwell consist of large-pane window frames, and there are steel exterior doors leading to each stairwell from the outside.

The collections area consists of five rooms of equal size and construction in the southern group of rooms on the third floor of the building. The rooms contain collections from Arkansas counties administered by the Arkansas Archeological Survey Station, Magnolia. Collections are also stored in the hallway outside the rooms. Room 302, which houses the Service collection, is on the southeast corner of the building and on the eastern side of the hallway. The area of this room is 182 ft².

On the eastern wall of Room 302, there is a 68-x-39-inch aluminum-frame window unit consisting of three panes. Water stains around the frame, on the radiator, and on the floor indicate leakage at some time in the past. The windows do not have shades. There was a wooden panel door on the western wall of the room leading to the interior hallway, but this has been removed. A sink fixture along the north wall of the room dates from the use of the room as a dormitory, but water has been shut off to this section of the building, and the fixture is not functional. Storage cabinets have been built into the north wall on either side of the fixture, but they are not

used for storage. A functional radiator unit is located beneath the windows on the eastern wall of the room. The room is serviced with electricity. All of the utility systems are 40 years old. There are no overhead pipes. The room is currently at 95 percent capacity.

The building is structurally sound, but water leakage from the window frames must be corrected. Ultraviolet (UV) ray deterioration of the interior contents of the room is apparent, and protective shades should be installed. The building is not intended as a permanent curation facility but rather as an artifact holding area. In order to be used for long-term curation, these and other modifications must be made.

Environmental Controls

Temperature and humidity levels in the collections storage area are neither monitored nor controlled. The radiator in the room and sunlight are the only heating systems, and cooling is achieved by opening the windows. Primary and secondary containers and labels within them exhibit the effects of extreme moisture and heat. Lighting is provided by a ceiling fixture with two incandescent bulbs and an east-facing window. The window does not have blinds or shades, and the morning sun casts bright light and produces high temperatures within the room. UV radiation has discolored primary containers and shelving materials exposed to the sun. The collections area is maintained by the survey staff on an as-needed basis.

Pest Management

There is no integrated pest-management program in place in the collections storage area, although the university staff regularly checks for pests on the first floor of the building. There are no precautions taken against insects or rodents. However, the Arkansas Archeological Survey staff regularly checks for pests and takes appropriate action. No signs of pest infestation were noted in the collections storage area, but many labels on secondary containers have been damaged by insects.



Figure 2. View of shelving unit, Graham Hall, Room 302.

Security

There are no alarm systems in the repository. An exterior steel door with a dead-bolt lock is the only route of ingress to the third floor and the collections storage area and is accessed through the northern stairwell. At the top of the stairwell, at the entrance to the northernmost section of dormitory rooms, there is a key-locked, steel-and-wood door. Finally, a steel door with a key lock is located at the entrance to the southern section of dormitory rooms. The rooms in the collections storage area have no doors. All windows in the vacant portion of the building are kept locked. Windows in the collections storage area are opened when staff are working there and locked upon leaving. Access to the keys for the collections storage area is strictly controlled by the director of the Arkansas Archeological Survey Station, Dr. Schambach. The building is regularly patrolled by campus police. Windows are not easily accessed from the ground floor. There is no history of forced entry into the building or collections storage area.

Fire Detection and Suppression

No fire-detection or -suppression systems exist in the repository or the collections storage area.

During working hours, personnel in offices on the first floor are the only means of fire detection.

Artifact Storage

Storage Units

There are five shelving units storing Service collections. They are made of untreated 2-x-4-inch lumber, bolted and nailed together. The dimensions of each shelving unit are 4.8 x 2.2 x 6 feet (w x d x h). There are three shelves, and each measures 4.6 x 2 feet. The individual shelves are constructed by nailing 1-x-6-inch pine boards to the bolted framework. All three shelves are used, and primary containers are stacked two to eight boxes high on the shelves (Figure 2).

Primary Containers

One-cubic-foot acidic cardboard boxes with telescoping lids and stapled sides serve as primary containers for Service collections from the Southeast Region. Box labels consist of typed, 3-x-5-inch acidic index cards taped to the end of each box. Label information includes site number, site name, provenience within the site, and, occasionally, material class, date, reservoir, and catalog numbers.



Figure 3. Closeup view of primary containers on the first shelving unit.



Figure 4. Contents of Box 40, illustrating primary and secondary containers.

Secondary Containers

Most (98%) of the secondary containers used to curate Service collections from the Southeast Region are open, acidic cardboard boxes (Figures 3 and 4). The dimensions of these boxes are (l x w x h): (1) 10 x 10 x 3 inches; (2) 10 x 5 x 3 inches; (3) 5 x 5 x 3 inches; and (4) 5 x 2.5 x 3 inches. Within each secondary container,

cultural materials are enclosed in plastic zip-lock bags, acidic paper envelopes, plastic vials, plastic boxes, glass jars, and aluminum foil. One percent of the secondary containers are plastic bags, glass jars, cloth bags, and aluminum foil. One percent of the cultural materials were loose in the primary container. Labels consist of acidic 3-x-5-inch cards attached with paper clips to the



Figure 5. Front exterior of Magale Library, facing north.

insides of the secondary containers. Information is written directly on the label in pen, pencil, or marker. Additionally, the innermost containers are labeled with acidic paper tags written in similar media. The labels specify site number, provenience, accession, and catalog number.

Laboratory Processing and Labeling

Most (64%) of the artifacts, debitage, and faunal remains have been cleaned. Soil and ^{14}C samples have not been cleaned in order to retain their integrity for testing. Nearly three-fourths (73%) of all cultural materials have been labeled with the site number, accession, and catalog numbers in india ink. Almost all cultural materials have been sorted by provenience (41%) or material class (57%). Prehistoric material classes include lithics (30%), ceramics (41%), faunal remains (3%), shell (6%), ^{14}C samples (3%), and other (11%); historical-period material classes include ceramics (3%), glass (1%), metal (1%), and other (1%).

Human Skeletal Remains

U.S. Fish and Wildlife Service projects at Felsenthal NWR recovered human skeletal remains from at least 13 individuals from 12 sites in the materials observed by the inspection team (see

Table 2). Most of the remains are fragmentary and in fair condition. All are cleaned and labeled. They will be sent to the Arkansas Archeological Survey Headquarters in Fayetteville, Arkansas, for curation with the remainder of the survey's human skeletal remains.

Assessment of Magale Library, Room 116

Magale Library (Figure 5) is located on the Southern Arkansas University campus in Magnolia. It is a 64,800-ft², three-story library building with book stacks, study tables, offices, rest rooms, and loan desks located on the second and third floors, and the physical plant, loading dock, and additional offices located on the first floor.

Structural Adequacy

Magale Library was built in 1970. It is constructed of a poured concrete foundation and walls with a built-up asphalt roof. The roof was replaced in 1992. Both the roof and the foundation are structurally sound and have neither leaks nor cracks. There are two floors above grade and



Figure 6. Exterior loading-dock area of Magale Library, facing southwest.

one floor below grade. The building was not inspected except for the collections area located in the floor below grade.

The collections area consists of one room, approximately 500 ft², located on the first floor. The collections area functions as a laboratory and records storage facility for all counties administered by the Arkansas Archeological Survey Station, Magnolia. The repository is furnished with counters, shelving units, sinks, and desks. The associated archaeological documentation for the Southeast Region is archived in acidic cardboard boxes stored on wooden shelves in the repository.

There are no windows in the collections area. The ceiling and floor are poured concrete, and the exterior walls are concrete block. Interior walls are constructed of concrete block and plywood. There is one exterior steel double door that opens on the loading dock (Figure 6). The loading dock does not have an exterior door. There are overhead pipes containing water, but there is no history of any leaks. The room is currently at 80 percent capacity.

Environmental Controls

Temperature and humidity levels in the collections storage area are controlled by the heating, ventilating, and air conditioning (HVAC)

system that maintains the library building via ceiling ducts. Filters in the system are changed regularly. Lighting is provided by eight 40-watt, fluorescent fixtures without UV filters. There are no windows. The collections area is maintained by the survey staff on an as-needed basis.

Pest Management

There is an integrated pest-management program in place for the library building as a whole. It is administered by the university staff. In addition, the Arkansas Archeological Survey staff regularly checks for pests and takes appropriate action. No signs of pest infestation were noted in the collections storage area, but no precautions have been taken against insects or rodents.

Security

The library building is regularly patrolled by campus police. Access to the interior of the building is controlled by dead-bolt locks on all doors. The collections storage area, however, is in a unique position. It lies outside the first-floor rear exterior entrance on the loading dock. The exterior door to the collections storage area is constructed of steel and has a dead-bolt lock. The local telephone company has access to the

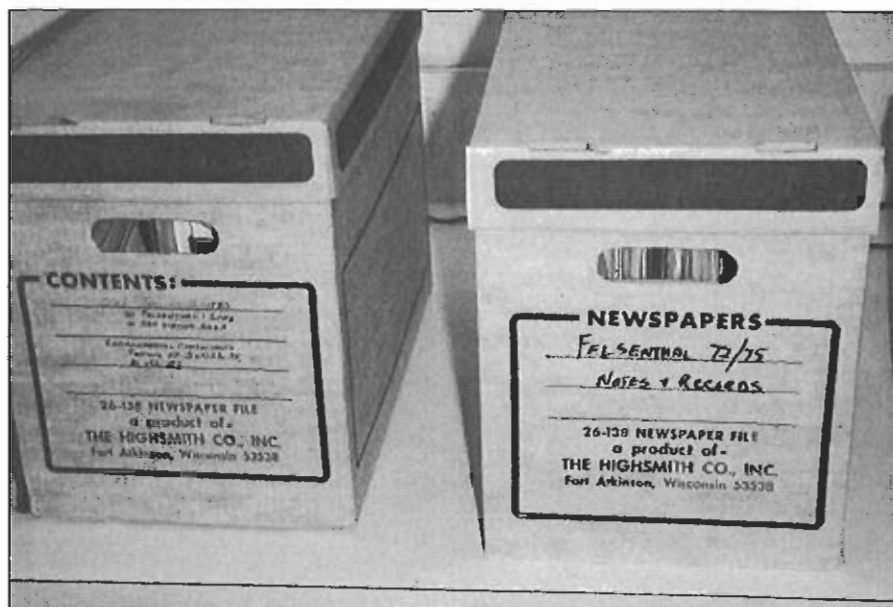


Figure 7. Primary containers holding U.S. Fish and Wildlife Service documentation, Magale Library, Room 116.

collections storage area in order to service switching equipment in a room adjacent to the collections area. The room has an interior wooden door with a key lock. There is no access to the room from the exterior of the building, nor are there any windows in the room or in the collections storage area. No alarm systems exist in the collections storage area. Access to the keys for the collections storage area is strictly controlled by the director of the Arkansas Archeological Survey Station, Dr. Schambach. There is no history of forced entry into the building or collections storage area.

Fire Detection and Suppression

Fire alarms that are connected to the campus fire department are located in the library building. The library has a sprinkler system and fire extinguishers. There are fire extinguishers in the collections storage area with up-to-date inspection tags but no sprinkler system, smoke detectors, or fire alarms.

Artifact Storage

No cultural materials are curated at the Magale Library.

Records Storage

Approximately 5 linear feet of associated documentation from Service archaeological projects at Felsenthal NWR are stored at the Magale Library repository. Shelving units similar to those in Graham Hall house the associated documentation in this collections area. Boxes holding documentation are stacked up to four high on the top shelves.

One-cubic-foot acidic cardboard boxes with telescoping lids and stapled sides serve as primary containers for the associated documentation belonging to the Service. Boxes are labeled directly, with information written on their ends in indelible marker (Figure 7). Occasionally, a typed acidic index card is also taped to the end of a box.

The documentation has not been inventoried, but it is readily accessible. Documentation is arranged by project. A duplicate copy of all documentation is stored at survey headquarters in Fayetteville. Duplicates are made on acidic paper. Table 3 presents a summary of the secondary containers that house the documentation in the collection.

Paper Records

Paper records are stored in an environmentally controlled room. All documents are stored in

Table 3.
Summary of Associated Documentation at the Arkansas Archeological Survey Station

Box Number	Project	Secondary Containers			Loose	Linear Feet
		Folders	Binders	Envelopes		
1	Bangs Slough	3	4	—	1	0.5
2	Felsenthal	—	2	1	3	0.6
3	Shallow Lake 3UN52	—	9	—	—	0.6
4 ^a	Felsenthal	29	—	—	—	1.1
5 ^a	Felsenthal	16	1	—	1	1.1
6 ^a	Felsenthal	57	—	—	—	1.1
Total		105	16	1	5	5.0

^aMiscellaneous sites.

acidic cardboard boxes with telescoping lids (Figure 8). Documentation is organized by project, by site, or both. Most of these documents are stored in acidic file folders or loose-leaf binders. Two boxes are labeled directly with black marking ink and indirectly with a 3-x-5-inch typewritten card taped on one end. Three boxes are labeled directly with black marking ink. One box is labeled indirectly with a similar card. Label information consists of project name, site numbers, dates, and general

description of contents. Paper records include draft reports; correspondence; survey, feature, catalog, photographic log, and level forms; artifact analysis notes and tables; and final reports. Burial forms and other related documentation are stored at survey headquarters.

Photographic Records

Photographic records are stored in an environmentally controlled room. The only



Figure 8. U.S. Fish and Wildlife Service paper records, Magale Library, Room 116.

photographic records in this repository are contact sheets, which are stored with their respective photographic logs loose in the primary container. All other photographic materials are curated at survey headquarters in Fayetteville.

Maps and Oversized Documents

Oversized documents are folded and stored with the remainder of the documentation.

Project Reports

A few final project reports are stored with the associated documentation, but these are copies of reports on file at survey headquarters in Fayetteville.

Assessment of Collections-Management Standards for Both Repositories

Registration Procedures

Accession Files

All cultural materials are accessioned upon receipt.

Location Identification

The accession file does not include the location of the collection within the repository.

Cross-Indexed Files

The files are not cross-indexed.

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

The Smithsonian trinomial site-numbering system is used by the Arkansas Archeological Survey.

Computerized Database Management

There is a survey-wide computerized database-management system, which is maintained at survey headquarters.

Written Policies and Procedures

Minimum Standards for Acceptance

The Arkansas Archeological Survey has minimum standards for acceptance of collections that are outlined in "Information and Curation Standards for Those Considering the Arkansas Archeological Survey as a Depository for Long Term Curation of Archeological Materials" (Effective 1 June 1989, Revised 25 October 1991 and 30 August 1994), which is available from the Arkansas Archeological Survey. Curation and records-management policy also are treated in these standards.

Field-Curation Procedures

There are written field-curation procedures.

Loan Policy

Loans are granted to bona fide researchers after the completion of loan forms.

Deaccessioning Policy

There is no deaccessioning policy. Collections are not deaccessioned.

Inventory Policy

There is no inventory policy.

Latest Collection Inventory

The date of the most recent collection inventory is unknown.

Curation Personnel

Dr. Frank Schambach is Professor of Anthropology at Southern Arkansas University and holds a Ph.D. from Harvard University.

Curation Financing

The Arkansas Archeological Survey provides funding, and Southern Arkansas University provides space.

Access to Collections

Access to the collections and associated documentation is controlled by the director of the Arkansas Archeological Survey Station, Magnolia. The director, his secretary, and the university physical plant staff have keys to both repositories. The local telephone company has keys to the repository in the Magale Library in order to access the telephone switchboard.

Future Plans

The director views maintenance of collections for scholarly research and education as his primary responsibility. There is a plan to bring together all Arkansas Archeological Survey collections in a central state repository.

Comments

1. Neither repository meets all federal security and environmental controls requirements.
2. Both repositories lack fire-detection and -suppression systems.
3. Graham Hall has unnecessary clutter in the hallway.
4. The window frame in the Graham Hall repository has water-leakage problems.
5. The Graham Hall repository has excessive UV radiation affecting containers, labels, and cultural materials.
6. The Graham Hall repository has conditions of excessive heat and moisture that affect containers and cultural materials.

7. Temperature and humidity levels are not monitored in either repository.

8. Human skeletal remains were presumably transported to survey headquarters for evaluation, yet the survey team found the remains of at least 13 individuals in the Graham Hall repository.

Recommendations

1. The following modifications to the repository in Graham Hall must be made to bring it into compliance with existing federal standards and guidelines.
 - a. Seal the window frame to prevent water damage.
 - b. Install UV filters and blinds on the windows.
 - c. Install UV filters on fluorescent lights.
 - d. Install temperature- and humidity-level monitoring devices.
 - e. Install an HVAC or integrated heating and cooling system.
 - f. Install a secure door for the Service collections area.
 - g. Install fire-detection and -suppression systems.
 - h. Institute an integrated pest-management program.
2. The following modifications to the Magale Library repository must be made to bring it into compliance with existing federal standards and guidelines.
 - a. Install UV filters on fluorescent lights.
 - b. Install temperature- and humidity-level monitoring devices.
 - c. Prevent access to the repository by telephone company employees.
 - d. Install fire-detection and -suppression systems.
3. The Arkansas Archeological Survey states in its curation standards that all future collection acquisitions must comply with 36 CFR Part 79. This stipulation should apply to current acquisitions as well. Collections will require partial rehabilitation to comply with existing federal

guidelines and standards for curation. If the collections are to be moved within the next few years to a central repository, this rehabilitation can be postponed until that time. If the collections remain at Southern Arkansas University permanently, the following rehabilitation actions must take place as soon as possible:

a. Rebag and rebox all collections into four-mil, zip-lock, polyethylene bags, and acid-free boxes. Interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be lettered in india ink and included in each polyethylene bag.

b. Label the exterior of all primary containers with permanent acid-free labels inserted in plastic sleeves.

c. Label the exterior of all secondary containers directly with a permanent medium.

d. Label directly all diagnostic artifacts (formed tools) with a permanent medium and cover coat.

e. Label directly a sample of large lots of debitage.

f. Sort ceramic sherds by type and directly label a diagnostic sample.

4. The inspection team was advised that all records curated at Southern Arkansas University are copies of the originals in Fayetteville. If original records are curated at Southern Arkansas University, they should be rehabilitated to comply with existing federal guidelines and standards for archival preservation. This rehabilitation should include the following.

a. Curate all paper documents in acid-free primary and secondary containers.

b. Make preservation copies of all paper documents on acid-free paper and store one copy in another location.

d. Curate all photographic documents in archival-quality containers.

Charles H. Nash Museum of Archaeology

Memphis, Tennessee

Repository Summary

Volume of Artifact Collections: 7.44 ft³

Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 0.25 linear feet

Compliance Status: Records need partial rehabilitation to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: There are no human skeletal remains in U.S. Fish and Wildlife Service archaeological collections from the Southeast Region.

Status of Curation Funding: Curation funding is not adequate. It is provided by the University of Memphis as part of that institution's overall budget.

Date of Visit: January 10–11, 1995

Point of Contact: Camille Wharey, Curator

The Charles H. Nash Museum, a part of the University of Memphis, is located at Chucalissa State Park, Memphis, Tennessee. The museum was established to preserve the Chucalissa site and provide facilities for research and interpretation of the site and, more widely, the archaeology of the Southeast. The museum has an inside exhibition hall with numerous display cases that describe the prehistoric inhabitants of the site and their lifeways and material culture. The facility includes an outdoor museum with reconstructed Mississippian temple mounds, a temple structure, and residences located around a central plaza. There is strong Native American involvement in the museum, and one Native American craftsman lives in the park year-

round. Service archaeological collections from Hatchie NWR, collected by University of Memphis staff, are curated in the repository of the museum.

Archaeological collections and associated documentation curated at the Charles H. Nash Museum for the Service's Southeast Region are stored in one repository at the museum. This repository consists of two collections storage areas. The Charles H. Nash Museum Laboratory houses the associated documentation, whereas the Charles H. Nash Museum Repository curates the archaeological collections.

Assessment

Built specifically as a museum, the Charles H. Nash Museum has 10,366 ft² of space (Figure 9).



Figure 9. Exterior, Charles H. Nash Museum of Archaeology.

The building contains offices, an exhibit hall, laboratory, library, repository, auditorium, exhibit-preparation room, darkroom, garage, lobby, reception area, and rest rooms.

Structural Adequacy

The Charles H. Nash Museum was constructed in the late 1950s. The building consists of two stories over part of its area, but only the first story is used. It has a concrete-slab foundation, reinforced concrete-block exterior walls, and a rubber-coated steel roof. The roof has leakage problems in the auditorium and laboratory, but these are being corrected. The interior walls are constructed of concrete panels, and the floors are poured concrete. The ceiling in the repository is constructed of steel (base of the roof); that in the laboratory, of suspended acoustical tiles.

The museum consists of the following layout. The main entrance is oriented in a southeasterly direction. Upon entering the building, there is a lobby with an auditorium to the right, and library, rest rooms, and curatorial staff offices down a corridor to the left. As one passes by this corridor and through the doorway into the exhibition hall, the reception desk is to the right in the lobby. A double doorway opens off the left side of the exhibition hall to the laboratory. The repository is reached by passing through a

double doorway at the south end of the laboratory, proceeding down a hallway and again passing through a double doorway. A single doorway from farther down the exhibition hall provides access to an exhibit-preparation room, a mechanical room, and a darkroom.

At the end of the exhibition hall there are two craft stands where Native Americans sell craft products. At the exit from the exhibition hall, a vestibule connects on the right to a ramp leading to the outdoor museum. Three rest rooms and janitorial rooms are located to the left of the vestibule down a hallway. Along the walls of the ramp leading to the exterior of the building, there is an exhibit case displaying exposed strata from an earlier excavation with descriptive labels and interpretive information. An exterior steel door at the end of the ramp opens onto the plaza of a reconstructed Mississippian village.

The only window in the museum, on the eastern wall of the library, is a permanently sealed, 3-x-4-foot aluminum-frame unit consisting of one pane of tempered glass with UV coating. There is alarm-system wiring attached to this window.

This repository consists of two collections storage areas housing Service archaeological collections from the Southeast Region: (1) the laboratory where associated documentation is curated, and (2) the repository where archaeological

collections are curated. The area of the laboratory is 768 ft², and the area of the repository is 1,062 ft².

There are three sink fixtures in the laboratory, one each in the exhibit-preparation room and darkroom. The rooms are provided with electricity, heating, and cooling. The utility systems have been in place approximately 35 years, although modifications to the front of the building include plumbing in 1975 and heating in 1994. There are overhead pipes containing water, but there is no history of any leaks. The repository is currently at 95 percent capacity.

The building is structurally sound and serves its function well as an interpretive museum for the Chucalissa archaeological site and as a repository and laboratory for cultural materials acquired during research.

Environmental Controls

Temperature and humidity in the repository and laboratory are monitored daily. Temperature levels are maintained between 65 and 75°F by a central air conditioner and space heaters with thermostats. Humidity levels are monitored by a hygrometer, and the targeted humidity is 50 percent. There are dust filters in the ducts of the central air-conditioning system. The building is maintained daily in the exhibition area and weekly in all other areas by the curatorial staff. The laboratory and repository are illuminated with fluorescent lights without UV filters.

Pest Management

There is an integrated program for pest management at the Charles H. Nash Museum, which includes monitoring and control on an as-needed basis by the university physical plant staff. Precautions include sticky traps and visual inspection. There are no signs of insect or rodent infestation.

Security

Exterior doors are secured with dead-bolt locks. Security measures for the collections storage area include a combination dead-bolt lock and a key lock on the double doors leading to the

exhibition hall, key locks on the doors leading from the laboratory to the exhibit-preparation room and hallway, and a key lock and combination dead-bolt lock on the door to the repository. All doors are solid-core wood. Access is limited to the curation staff and the university physical plant. There are museum staff members living permanently across from the museum who function as full-time guards.

Fire Detection and Suppression

Fire protection in the collections storage area consists of a one-hour-rated fire door on the repository and fire extinguishers to the right of the double doors in the laboratory and to the left of the double doors in the repository. Inspection tags on the fire extinguishers are dated December 1994. A fire alarm is mounted to the wall adjacent to the laboratory doors leading to the exhibition hall. The collections storage area is not fireproof, but because most construction is of concrete and steel, it is fire resistant.

Artifact Storage

Storage Units

Service archaeological collections are stored on steel shelving units in the repository room under Accession Number F1978.11. The units have sealed pressboard shelves measuring approximately 54 x 24 x 72 inches (w x d x h). There are six shelves per unit, with a space of approximately 20 inches between shelves. Archaeological collections belonging to the Service occupy two shelves on one shelving unit (Figure 10).

Primary Containers

Two sizes of acidic cardboard boxes with telescoping lids and stapled sides serve as primary containers for archaeological collections from the Southeast Region (Figure 11). There are 27 boxes measuring 10 x 9.25 x 3.5 inches (l x w x h), and 21 boxes measuring 10.25 x 5.25 x 3.5 inches. Secondary containers are padded with plastic "bubble wrap" packaging within each primary container to prevent damage.

The end of each box is labeled directly in indelible marker (see Figure 11, Table 4).



Figure 10. Collections storage area, Charles H. Nash Museum of Archaeology.

Seventeen boxes had been painted with latex paint prior to being labeled to create a less-absorbent surface for the marking pen. Forty-seven boxes also have adhesive labels with information handwritten in marker (see Figure 11). Direct label information consists of site number and catalog numbers. Adhesive label information consists of site number; accession number; "FWS," denoting U.S. Fish and Wildlife Service, Southeast Region; and "Hatchie National Wildlife Refuge." Label information is legible and distinct. One box is unlabeled.

The primary container for associated documentation is a fireproof, legal-sized file cabinet measuring 21 x 31 x 57 inches (w x d x h).

Secondary Containers

Secondary containers for all archaeological materials are two-mil, plastic, zip-lock bags, labeled directly in marker (see Figure 11). Label information consists of the accession number, site number, and "HNWR," denoting Hatchie National Wildlife Refuge.

Secondary containers for all associated documentation consist of acidic manila file folders. Catalog numbers, folder numbers, and site numbers are written in marker directly on the folders or on adhesive labels attached to the folder tabs.



Figure 11. Primary and secondary containers, collections storage area, Charles H. Nash Museum of Archaeology.

Laboratory Processing and Labeling

Most artifacts, debitage, and faunal remains have been processed. Soil samples and ^{14}C samples have not been cleaned in order to retain their integrity for testing. Nearly two-thirds of all cultural materials have been labeled with the site number, accession, and catalog numbers in india ink. Cultural materials are sorted by provenience in most of the primary containers and by either material class or provenience in the secondary containers. Prehistoric material classes include lithics (82%), ceramics (3%), faunal remains (1%), shell (1%), and other (1%); and historical-period material classes include ceramics (7%), glass (3%), metal (1%), and other (1%).

Human Skeletal Remains

There are no human skeletal remains in the collections curated by the Charles H. Nash Museum for the Service.

Records Storage

Paper Records

The 0.25 linear feet of documentation associated with Service collections from the Southeast Region includes catalog forms, site survey forms, computer printouts of the catalog, and collection data for unassociated funerary objects. These paper records are stored in one drawer of a fire-proof, legal-sized file cabinet located in the laboratory of the museum (Figure 12).

All documentation was last inventoried in January 1995 and is readily accessible and arranged by accession number. Copies of all documentation for Southeast Region Service collections are kept at the University of Memphis, and copies of site forms are kept at the Tennessee Division of Archaeology office in Nashville. There is an organized file of contract reports that includes negative-findings reports.

Photographic Records

There are no photographic records associated with collections curated at the museum for the Service.

Table 4.
Summary of Hatchie NWR Collections at the Charles H. Nash Museum of Archaeology

Site	Box Number	Volume (ft ³)
40HD37	9	0.19
40HD38	31	0.11
40HD39	32	0.11
40HD40	30	0.11
40HD41	40	0.11
40HD42	41	0.11
40HD43	1, 22	0.38
40HD44	45	0.11
40HD45	20	0.19
40HD46	46	0.11
40HD47	23	0.19
40HD48	18	0.19
40HD49	19, 26	0.38
40HD50	5, 6, 7	0.57
40HD51	42	0.11
40HD52	14, 47	0.38
40HD53	16, 21	0.38
40HD54	28	0.11
40HD55	35, 43	0.22
40HD56	36	0.11
40HD57	37	0.11
40HD58	38	0.11
40HD59	8	0.19
40HD60	17, 27	0.38
40HD61	44	0.11
40HD62	10, 11, 13	0.57
40HD63	49	0.11
40HD64	4, 12	0.38
40HD65	3, 15	0.38
40HD67	25	0.19
40HD68	34	0.11
40HD69	39	0.11
40HD70	2	0.19
40HD71	48	0.11
40HD Loc A	33	0.11
?	29	0.11
Total		7.44



Figure 12. Records storage area, Charles H. Nash Museum of Archaeology.

Maps and Oversized Documents

There are no maps and oversized documents associated with collections curated at the museum for the Service.

Project Reports

There is one project report concerning Service collections from the Southeast Region at the museum.

Collections-Management Standards

Registration Procedures

Accession Files

All cultural materials are accessioned upon receipt.

Location Identification

The location of the collection within the repository is identified in the accession file.

Cross-Indexed Files

The files are cross-indexed.

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

The Smithsonian trinomial site-numbering system is used.

Computerized Database Management

There is a computerized database-management system in place. The collections records are in digital form, and backups of these records are made daily on disk. A backup copy is stored off-site. Two persons in the museum have access to the digital collections records.

Written Policies and Procedures

Minimum Standards for Acceptance

There are minimum standards for the acceptance of archaeological collections. Collections are acquired at the discretion of the museum director. Standards require submission of all associated documentation, including all original field notes, photographic records, and reports. The acceptance of federally owned and administered collections must be made with respect to 36 CFR Part 79, which is strictly followed by the museum. All collections must have been acquired ethically. The museum curates human remains in accordance with U.S. Public Law 101-601 and Tennessee state laws. No human remains will be accepted if lineal descent can be traced to the remains.

Curation Policy

There is a comprehensive plan for curation. This plan addresses collection objectives, acquisition, deaccession, loans, temporary deposits, teaching collections, care of the collections, records, insurance, access, and ethics.

Records-Management Policy

The existing records-management policy concerns registration records and associated documentation.

Field-Curation Procedures

There are no field-curation procedures.

Loan Policy

Loans are made only to other institutions. There are written procedures for outgoing and incoming loans.

Deaccessioning Policy

There is a written deaccessioning policy.

Inventory Policy

There is no written inventory policy. Collections are inventoried upon receipt and whenever possible thereafter.

Latest Collection Inventory

Archaeological collections were last inventoried in 1994. Associated documentation was inventoried in January 1995.

Curation Personnel

Camille Wharey, M.A., is a University of Memphis research associate and functions as the curator. Toreda Earls, M.A., is a technical clerk who serves as a part-time staff member. Interns and students occasionally work at the museum under the direction of the curator.

Curation Financing

The University of Memphis provides funding out of the general budget. There is no separate budget for the museum.

Access to Collections

Access to the collections is controlled by curatorial personnel. The museum director must receive written requests from bona fide researchers at least two weeks in advance. Access is supervised by the curatorial staff. Students must be under the supervision of a qualified professional. No cultural materials or associated documentation may be removed from the museum. Copies of papers or reports generated by researchers must be provided to the museum and the federal agency concerned if access is given to federally owned and administered collections.

Future Plans

The future of the Charles H. Nash Museum is in doubt. It is scheduled to close permanently on or about June 31, 1995, because of lack of funding.* If funding is approved, there are plans to upgrade the museum and hire additional staff. If the museum closes, collections from the Service will probably be transferred to the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

Comments

1. Federally owned and administered archaeological collections are curated by the museum under the guidelines of 36 CFR Part 79.
2. Archaeological collections curated in the repository room at the Charles H. Nash Museum for the Service have been accessioned, cleaned, cataloged, and put in serviceable primary and secondary containers in adequate shelving units.
3. Primary containers are not acid free.
4. Associated documentation, consisting of paper records, is stored in a fireproof safe in the laboratory room of the museum. The records are

* *Editor's note:* As of this printing, the Nash Museum was still open and curating Service collections. M. L. Moore is the new director of the museum.

enclosed in clearly labeled acidic file folders. Duplicate copies are stored off-site at the University of Memphis and at the Tennessee Division of Archaeology, Nashville.

5. Neither the repository nor the laboratory has an HVAC system, but acceptable temperature and humidity ranges are maintained according to American Association of Museums (AAM) guidelines.

6. The rooms are not fireproof but are generally fire resistant. There is one fire extinguisher in the repository and one in the laboratory. Both have up-to-date inspection tags.

7. Security for the repository and the laboratory is provided by controlled access, solid-core doors, key locks, and combination dead-bolt locks with combinations known only by select curatorial personnel.

Recommendations

1. Rebag and rebox all collections into four-mil, zip-lock, polyethylene bags, and acid-free

boxes. Interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be lettered in india ink and included in each polyethylene bag.

2. Label the exterior of all primary containers with permanent acid-free labels inserted in plastic sleeves.

3. Individually label all cultural materials.

4. Place associated documentation in permanently, directly labeled archival-quality file folders.

5. Install fire-detection and -suppression systems.

6. Install an HVAC system.

7. Install a security system.

8. Increase funding to pay for a full-time curator and at least two full-time staff members.

Division of Archaeology Headquarters

**Tennessee Department of Conservation,
Nashville, Tennessee**

Repository Summary

Volume of Artifact Collections: 8 ft³

Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 0.79 linear feet

Compliance Status: Records will require some rehabilitation to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: None (see Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area)

Status of Curation Funding: Funding derives from the annual state budget appropriated by the Tennessee State Legislature.

Date of Visit: November 2, 1994

Point of Contact: Suzanne Hoyal, Site File Curator

The Division of Archaeology headquarters office of the Tennessee Department of Conservation is located in Nashville, Tennessee. The director and staff coordinate all statewide aspects of the Division of Archaeology and maintain the Tennessee state site files. The office consists of a one-story brick building with offices; state site files curation and research areas; metal electrolysis, artifact conservation, photographic, and graphics facilities; and temporary collections storage units. U.S. Fish and Wildlife Service archaeological collections from the

Tennessee National Wildlife Refuge are temporarily curated here while undergoing analysis by a staff member prior to transfer to the central curation facility at the Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

Assessment

Archaeological collections and associated documentation for the Southeast Region of the Service are temporarily curated at the Tennessee Department of Conservation, Division of Archaeology Office repository, which has one collections storage area. Archaeological collections



Figure 13. Exterior, Division of Archaeology Headquarters.

and associated documentation from the Service are curated here while analysis is being performed, but will be transferred to the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

The 6,800-ft², one-story structure was built in Nashville in the 1960s specifically as the headquarters of the Division of Archaeology, Tennessee Department of Conservation (Figure 13). The building contains offices, a laboratory, a library, a repository, a darkroom, and rest rooms.

Structural Adequacy

In addition to its headquarters function, the building also serves as a repository for the Tennessee state site files and functions as a temporary collections facility and laboratory for initial conservation and stabilization of archaeological materials from projects administered by the resident staff.

The building has a concrete-slab foundation, brick facing on reinforced concrete-block exterior walls, and a tar-and-gravel roof. Interior walls are constructed of concrete blocks (other side of exterior walls), and floors are poured concrete. The ceiling in the repository consists of

suspended acoustical tiles. There is evidence of roof leakage in the past, but according to the staff, it has apparently been corrected. A minor separation crack is evident between a portion of one wall and the foundation. The suspended acoustical ceiling and partitions were added between 1980 and 1985.

The floor plan of the building consists of three functional areas: (1) laboratory, offices, and site file repository; (2) loading dock and hallway; and (3) a group of offices. The eastern area of the building consists of six offices and a dark room. A rest room is located off the eastern side of the loading dock and hallway area. A fume hood at the north end of the loading dock and hallway contains metal electrolysis equipment. The western area of the building consists of a series of seven offices along the north wall and a large open area to the south that contains shelving units, tables, a laboratory facility, and filing cabinets. Part of this area is devoted to the Tennessee state site files, with the remainder used as temporary storage for archaeological collections and associated documentation.

There are six exterior doors along the south side of the building. Two are steel loading-dock doors measuring 10 x 12 feet, and four are standard steel entry doors, measuring 3 x 7 feet, with wire-mesh security windows that measure 2 x 2.5 feet.

Windows are confined to the office area on the east side of the building. There are none in the rest of the building except in the doors. There are two double-hung, aluminum-frame windows along the south wall measuring 3 x 4 feet. Four similar windows are located along the east side of the building, with two along the north wall. All windows have blinds.

The building is surrounded by a chain-link fence topped with three strands of barbed wire. Entry is afforded by two chain-link gates also topped with barbed wire (see Figure 13).

Environmental Controls

Temperature and humidity levels in the building are not monitored but are controlled by a central HVAC system with thermostats. The targeted temperature range is 65–75°F. There are dust filters in the ducts of the central heating and cooling system. A privately contracted janitorial service maintains the building twice a week. The interior of the building is illuminated with fluorescent lights without UV filters.

Pest Management

Precautions against insects and rodents are taken on an as-needed basis. Curatorial personnel spray when necessary. There have been few problems in the past, and no signs of infestation were noted.

Security

The building and grounds are surrounded by a chain-link fence with barbed wire. The chain-link gates are secured with a padlock after hours. Exterior steel doors are secured with dead-bolt locks. Loading-dock doors cannot be opened from the outside. Access is limited to Division of Archaeology staff. There are no separate security measures for the collections storage area.

Fire Detection and Suppression

Four fire extinguishers were noted in the building. One has no inspection date, while the re-

maining three have a date of February 1988. All fire extinguishers should be inspected and serviced. The facility is not fireproof, but is relatively fire resistant because of the use of brick, concrete, and steel in its construction.

Artifact Storage

Storage Units

Service collections from the Southeast Region are temporarily stored on two shelves of an eight-shelf metal storage unit measuring 3 x 1.5 x 6 feet (w x d x h) (Figure 14), under Accession Number 92-15.

Primary Containers

Archaeological collections from the Southeast Region are stored in eight 17-x-13-x-11-inch (l x w x h) stapled, acidic cardboard boxes. Site numbers, proveniences, material classes, and accession numbers are written directly on the boxes in marker (Table 5).

Associated documentation is stored in a locked metal file cabinet in the office of the staff archaeologist who excavated and is analyzing the sites.

Secondary Containers

Secondary containers for archaeological collections from the Service's Southeast Region are plastic zip-lock bags. Site numbers, proveniences, accession numbers, and catalog numbers are written directly on the bags in marker.

Laboratory Processing and Labeling

Archaeological collections from the Southeast Region are cleaned and sorted by material class. Two-thirds of the cultural materials are individually labeled. Unlabeled artifacts consist of soil samples and small lithic debitage.

Human Skeletal Remains

No human skeletal remains from Service archaeological collections from the Southeast Region are curated at the Division of Archaeology Headquarters office of the Tennessee Department of Conservation.



Figure 14. Collections storage area, showing primary containers holding U.S. Fish and Wildlife Service materials, Division of Archaeology Headquarters.

Records Storage

Paper Records

Paper records associated with collections from the Service's Southeast Region total 0.79 linear feet and include background, excavation, and analysis records. The primary container is one drawer of a metal file cabinet located in the office of the investigating staff archaeologist.

Secondary containers include acidic manila file folders, metal loose-leaf binders, and acidic paper notebooks, all labeled directly in marker. One set of preservation/security copies of associated records is stored off-site at the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area; another set is stored at the home of the investigating staff archaeologist.

Table 5.
Summary of Archaeological Collections at Division of Archaeology Headquarters

Site (n = 5)	Box Number ^a	Type of Investigation
40BN100, -314; 40HS174-175	1	survey
40BN190A	2	survey and excavation
40BN190	3	excavation
40BN190A	4	excavation
40BN190A	5	excavation
40BN190	6	excavation
40BN190A	7	excavation
40BN190, -190A	8	excavation

^a Box numbers assigned by St. Louis District personnel for field-analysis purposes.

ing slides, an acidic manila folder containing photographs, and archival protectors containing negatives. The slides are labeled directly on their frames in marker; the photographs and negatives, indirectly, on the manila folder and the archival sleeves containing them. Label information includes site number, provenience, and date.

Maps and Oversized Documents

There is one site plan map stored in the same drawer of the file cabinet.

Project Reports

Project reports are located in the reports library of the Tennessee state site files, which is housed in this building.

Collections-Management Standards

Except as noted below, all information on registration procedures, written policies and procedures, and access to collections is equivalent to that discussed for the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

Curation Personnel

No curation personnel are located at this office.

Future Plans

Plans include continual improvement of the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

Comments

Southeast Region Service collections located at this office are being stored here until analysis is complete. They will then be permanently accessioned at the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

Recommendations

Given the fact that cultural materials are temporarily stored at this repository, recommendations concerning these collections will be presented in Chapter 6, which concerns the Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

Central Curation Facility, Division of Archaeology

**Tennessee Department of Conservation,
Pinson Mounds Museum,
Pinson Mounds State Archaeological Area**

Repository Summary

Volume of Artifact Collections: 41 ft³

Compliance Status: Artifacts will require some rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 0.92 linear feet

Compliance Status: Records will require complete rehabilitation to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: A NAGPRA summary has been completed for Division of Archaeology, Tennessee Department of Conservation collections. Remains from two individuals were noted by the inspection team.

Status of Curation Funding: Funding is acquired from the annual state budget appropriated by the Tennessee State Legislature.

Date of Visit: January 12, 1995

Point of Contact: Mark A. Norton, Curator

The Pinson Mounds Museum is located at the Pinson Mounds State Archaeological Area, Pinson, Tennessee. The museum curates cultural materials from sites located in the state archaeological area and also serves as the central curation facility for the Division of Archaeology, Tennessee Department of Conservation. Archaeological collections curated here for the U.S. Fish and Wildlife Service, Southeast Region,

include materials from the following refuges: Chickasaw, Hatchie, Lower Hatchie, and Tennessee, which includes Big Sandy, Busselton, Cross Creeks, Duck River, and National Migratory Wildlife Units.

Archaeological collections and associated documentation curated at the Central Curation Facility, Division of Archaeology, for the Service are stored in one repository. This repository consists of three collections storage areas. Service archaeological collections from the Southeast Region are curated in one storage area.

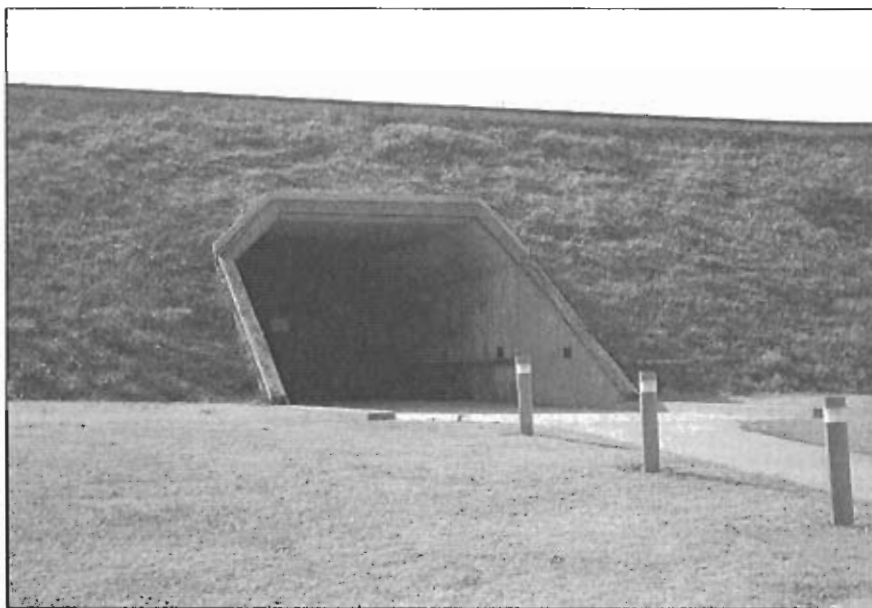


Figure 15. Main entrance, Central Curation Facility, Division of Archaeology.

Assessment

The Central Curation Facility, Division of Archaeology, is located at Pinson Mounds State Archaeological Area near Jackson, Tennessee. The building is a one-story structure with a ground-floor display area and a large below-grade curation facility built specifically as the Pinson Mounds Museum and the central repository of the Division of Archaeology collections. The ground floor of the museum contains a display area, offices, and a gift counter. The below-grade portion of the museum contains offices, processing and analysis laboratories, site files publications library, three collections storage areas, a drafting room, a photography laboratory, a mechanical room, a loading dock, and rest rooms (Figure 15). The size of the first and below-grade floor is 9,430 ft² each, for a total of 18,860 ft².

Structural Adequacy

The building was constructed in 1980 and functions as a permanent collections facility for archaeological materials from projects administered by the Tennessee Division of Archaeology and other agencies, including the U.S. Fish and Wildlife Service, as well as an interpretive

museum for Pinson Mounds State Archaeological Area.

The building has a concrete-slab foundation, reinforced concrete-block exterior walls mounded with earth, and a rubber-and-gravel roof covered with earth (see Figure 15). There have been no renovations except for a roof replacement in 1990. Interior walls are constructed of concrete blocks, and floors are poured concrete. The ceiling in the repository is suspended acoustical tiles.

The ground-floor portion of the facility consists of a museum exhibit hall, State Archaeological Area offices, and museum sales counter. The floor plan of the below-grade repository consists of three collections storage areas, an analysis room (laboratory), photographic laboratory, two equipment-storage rooms, a records room, two offices, a receiving dock, two rest rooms, and two mechanical rooms.

Environmental Controls

The temperature and humidity in the building are controlled by a sophisticated HVAC system installed and maintained under the supervision of the Tennessee Valley Authority (TVA). The system has four separate zones with separate thermostat and humidistat controls for simultaneous heating and air conditioning. Targeted

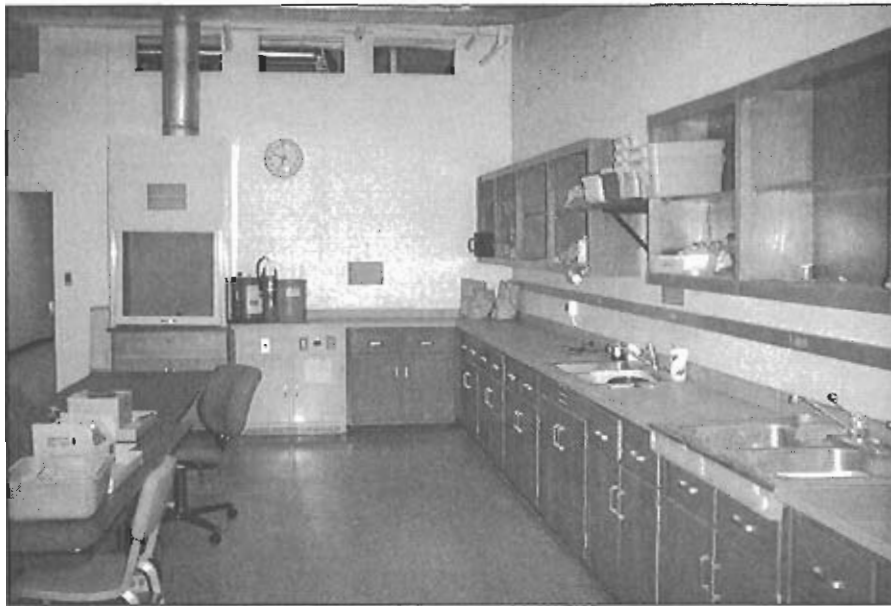


Figure 16. Laboratory area with asbestos counter tops, Central Curation Facility, Division of Archaeology.

temperature and humidity levels are 70°F and 50 percent, respectively. Additional humidity monitoring is performed by a sling psychrometer. Individual portable dehumidifiers are used within the collections storage areas to augment the main system, and the HVAC system has dust filters. The building is maintained on an as-needed basis by the curation staff. Fluorescent lights without UV filters illuminate the interior of the repository.

Counter tops in the laboratory are constructed of asbestos and are labeled to prevent drilling or scraping (Figure 16). There are no plans for removal of these counter tops.

Pest Management

There is an integrated program for pest management, which includes monitoring and control on a monthly basis by a professional pest-management company. There are no signs of insect or rodent infestation.

Security

There are exterior steel doors on the ground-floor entrance to the facility and on the below-

grade entrance located adjacent to the receiving area. An interior steel door separates the museum from the repository. Doors have key and dead-bolt locks. Keys are limited, but have been issued to the Pinson Mounds State Archaeological Area manager, rangers, and the curator. There are intrusion alarms on the doors and motion detectors within the museum. No windows are present.

Fire Detection and Suppression

The facility is fireproof. There are manual fire alarms in the repository and heat sensors and smoke detectors in each room. One fire extinguisher is located in the repository, and six other extinguishers are located throughout the facility.

Artifact Storage

Storage Units

There are three metal shelving units measuring 4 x 1.5 x 8 feet (w x d x h) with eight shelves each housing archaeological collections from the Southeast Region. Collections occupy 19 shelves in these units (Figure 17).

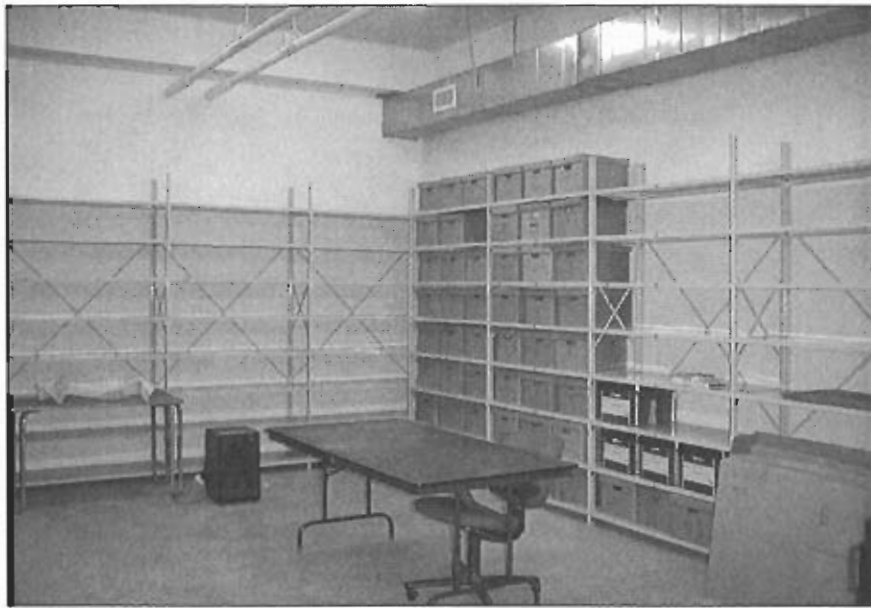


Figure 17. Collections Storage Area 1, showing primary containers holding U.S. Fish and Wildlife Service materials, Central Curation Facility, Division of Archaeology.



Figure 18. Primary and secondary containers holding U.S. Fish and Wildlife Service materials, Central Curation Facility, Division of Archaeology.

Primary Containers

Archaeological collections from the Service are stored in 41 stapled, 16.25-x-12.5-x-10-inch acidic cardboard boxes. The boxes are labeled directly in marker with the site number, provenience, material classes, and accession numbers (Figure 18, Table 6).

Secondary Containers

Most of the secondary containers used for Service archaeological collections from the Southeast Region are plastic zip-lock bags (87%), with paper bags (8%) and aluminum foil and film canisters (5%) packaging the remainder. Secondary containers are labeled directly in

Table 6.
Summary of Archaeological Collections at
the Central Curation Facility, Division of Archaeology

Refuge (Total Volume)^a	Site	Accession Number	Refuge (Total Volume)^a	Site	Accession Number
Chickasaw NWR (4 ft ³)	40LA133	92-2	Tennessee NWR		
	40LA134	92-3		National Migratory	40BN190 92-15
	40LA135	92-4		Wildlife Unit (6 ft ³)	
	40LA136	92-5		Big Sandy Unit (2 ft ³)	40HY2 78-321-8, 9
	40LA137	92-6			40HY54 78-321-2
	40LA-1F-1	92-7		McDaniel	78-321-5
	40LA138	92-8		Home	
	40LA139	92-9		Locality 1	78-321-1
	40LA140	92-10		Locality 2	78-321-3
	40LA141	92-11		Locality 3	78-321-4
	40LA142	92-12		Locality 5	78-321-6
				Locality 6	78-321
Hatchie NWR (1 ft ³)	40HS76	78-8	Busseltown Unit (1 ft ³)	40DR5-7,	78-321
	40HS149	78-417		-53, -57-58,	
	40LA83	79-136		-77-78,	
	40SW206	85-52		-240-241,	
	40TP48	79-104		Locs. 11-12,	
Lower Hatchie NWR (22 ft ³)	40LA8	78-494	Cross Creeks Unit (3 ft ³)	40SW228	91-23
	40LA90	78-495		40SW32,	78-322
	40LA92	88-60 ^b		-66, -79-83,	
	40LA92	90-81 ^c	Duck River Unit (2 ft ³)	Locs. 1 & 2	
	40LA93	88-61		40BN6,	78-321
	40LA94	88-62		-20, -23,	
	40LA104	91-36		-70-71,	
	40LA105	91-37		-97-99,	
	40LA106	91-38		40HS34-35,	
	40LA107	91-39		-38-39, -44,	
	40LA108	91-40		-67-69	

^aTotal volume for all refuges = 41 ft³.

^bFor site 40LA92, NAGPRA-related materials under this catalog number include miscellaneous human bone and associated funerary objects.

^cFor site 40LA92, NAGPRA-related material under this catalog number includes a human parietal bone.

marker with the site number, provenience, accession number, and catalog numbers (see Figure 18).

Laboratory Processing and Labeling

Ninety-three percent of the collections from the Service are cleaned, 65 percent are labeled, and all are sorted by material class (Table 7).

Human Skeletal Remains

A NAGPRA summary has been prepared for all Division of Archaeology, Tennessee Department of Conservation collections. There are remains from two individuals and one associated funerary object in the collections of the Service (see notes to Table 6; Figure 19).

Table 7.
Summary of Material Classes at the Central Curation Facility, Division of Archaeology, by Percentage

Refuge	Prehistoric						Historical-Period			
	Ceramics	Lithics	Fauna	Shell	¹⁴ C	Other	Ceramics	Glass	Metal	Other
Chickasaw NWR	6	52	2	—	—	—	9	20	6	5
Hatchie NWR	40	40	—	10	—	10	—	—	—	—
Lower Hatchie NWR	45	46	1	1	5	1	1	—	—	—
Tennessee NWR										
National Migratory Wildlife Unit	—	79	—	—	4	17	—	—	—	—
Big Sandy Unit	—	15	—	—	—	—	45	10	30	—
Busseltown Unit	10	70	—	10	5	—	2	—	3	—
Cross Creeks Unit	—	67	—	—	30	2	1	—	—	—
Duck River Unit	20	72	1	2	—	—	5	—	—	—
All refuges	15	54	1	3	5	4	8	4	5	1

Records Storage

Less than 1 (11.04 in.) linear foot of documentation associated with archaeological projects conducted on four Service refuges in the Southeast Region is being curated at the Central Curation Facility, Division of Archaeology. This consists of only paper and photographic records.

Paper Records

Paper records (0.66 linear feet) associated with Service collections from the Southeast Region include background information and excavation and analysis records (Table 8). These are stored in a metal file cabinet located in the records room (Figure 20). Secondary containers include

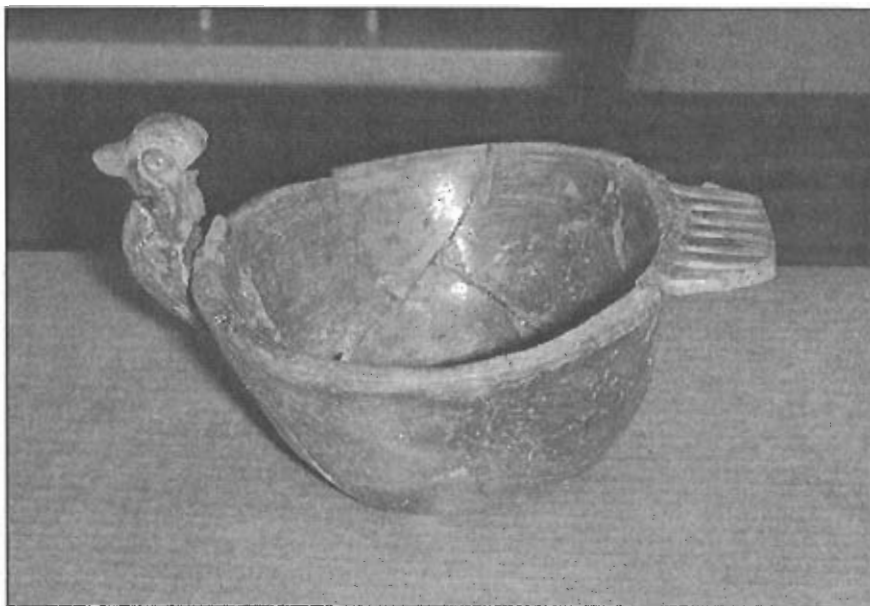


Figure 19. Ceramic vessel from the U.S. Fish and Wildlife Service collections, Central Curation Facility, Division of Archaeology.

Table 8.
Summary of Associated Documentation at
the Central Curation Facility, Division of Archaeology

Refuge/Site	Records (Linear Feet)		
	Paper	Photographic	Total
Chickasaw 40LA133-142	0.15 (1.80 in.)	0.02 (0.24 in.)	0.17 (2.04 in.)
Cross Creeks 40SW228	0.04 (0.48 in.)	0.15 (1.80 in.)	0.19 (2.28 in.)
Lower Hatchie 40LA92	0.38 (4.56 in.)	0.06 (0.72 in.)	0.44 (5.28 in.)
Tennessee 40BN190	0.09 (1.08 in.)	0.03 (0.36 in.)	0.12 (1.44 in.)
Total	0.66 (7.92 in.)	0.26 (3.12 in.)	0.92 (11.04 in.)

acidic manila file folders, acidic paper envelopes, plastic binder, and acidic spiral-bound paper notebooks (Figure 21), all labeled directly in pen, pencil, or marker.

Photographic Records

Photographic records associated with Service collections from the Southeast Region include black-and-white prints, contact sheets,

negatives, and slides. A total of 0.26 linear feet (see Table 8) is stored in a metal file cabinet located in the records room. Secondary containers include archival and nonarchival protectors, acidic file folders, plastic binders, and acidic paper envelopes (see Figure 21). Slide frames are directly labeled in marker, and the manila folders and the sleeves containing photographs, slides, and negatives are labeled in marker.

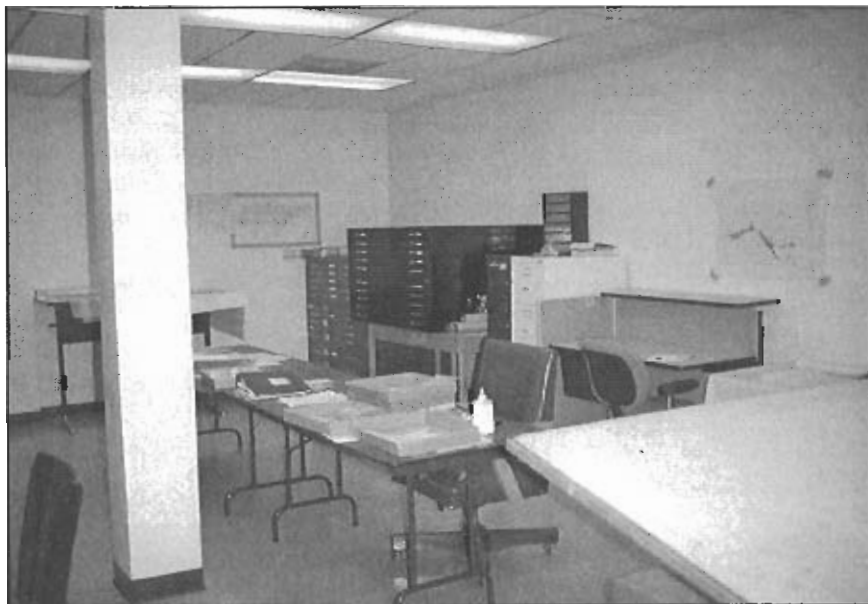


Figure 20. Records storage area, Central Curation Facility, Division of Archaeology.

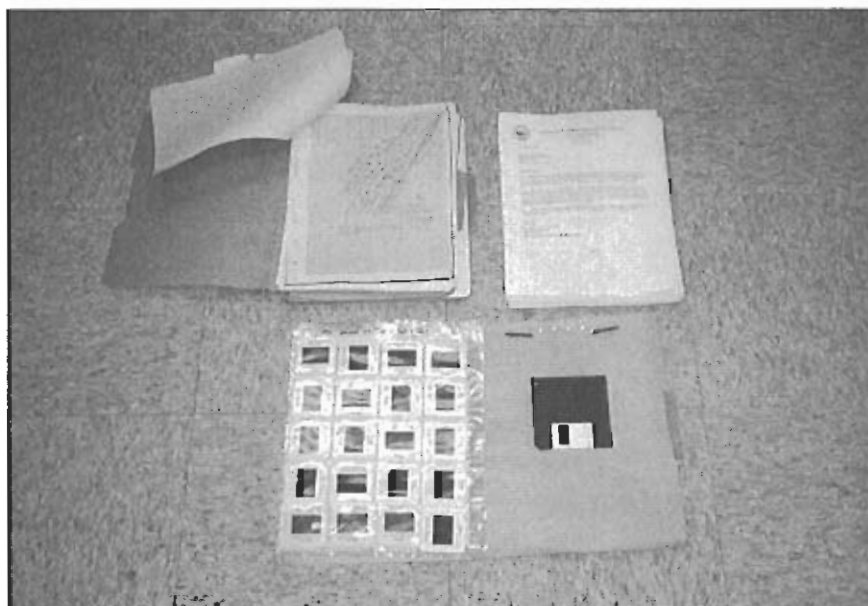


Figure 21. Paper and photographic records associated with U.S. Fish and Wildlife Service collections, Central Curation Facility, Division of Archaeology.

Label information includes site numbers, proveniences, and dates.

Maps and Oversized Documents

No maps or oversized documents associated with Service collections are curated in this repository.

Project Reports

There are eight project reports documenting collections curated at this repository for the Southeast Region (see the Service bibliography database).

Collections-Management Standards

Registration Procedures

Accession Files

All cultural materials are accessioned upon receipt and entered into the database.

Location Identification

The location of each collection is recorded in the database.

Cross-Indexed Files

The files are cross-indexed in the database.

Published Guide to Collections

There is no published guide to the collections.

Site-Record Administration

The Smithsonian trinomial site-numbering system is used.

Computerized Database Management

The repository uses automated data-processing techniques to manage its collections. All collections are in the process of being entered in digital form. Backups of these records are made weekly on hard drives and floppy disks. The backup floppy disks are stored at the Tennessee Division of Archaeology office in Nashville.

Written Policies and Procedures

Minimum Standards for Acceptance

There are minimum standards for acceptance, but these do not exist in written form.

Curation Policy

The repository does not have a written comprehensive plan for curation.

Records-Management Policy

There is no written records-management policy.

Field-Curation Procedures

There are no written field-curation procedures.

Loan Policy

There is no written loan policy.

Deaccessioning Policy

There is no written deaccessioning policy.

Inventory Policy

There is no written inventory policy.

Latest Collection Inventory

The collection is currently undergoing a complete inventory.

Curation Personnel

Mark A. Norton, who holds an M.A. in anthropology from the University of Memphis, is the curator and only current full-time staff member.

Curation Financing

Funding is allocated from the annual state budget appropriated by the Tennessee State Legislature.

Access to Collections

Access to collections is controlled by the curatorial staff. Access to collections is granted to bona fide researchers after a formal request is made. No collections have ever been lost or damaged.

Future Plans

Future plans include the promulgation of written policies and procedures and the possible hiring of additional staff.

Comments

1. The Tennessee Department of Conservation, Division of Archaeology Central Curation Facility, Pinson Mounds Museum meets all

federal security and environmental controls requirements.

2. Counter tops are constructed of asbestos and are labeled to prevent disruption of the fibers. There are no plans for removal of these counter tops.

3. Primary containers for Service collections from the Southeast Region consist of acidic cardboard boxes.

4. The majority of secondary containers for Service archaeological collections from the Southeast Region are plastic, two-mil, zip-lock bags, but paper bags and other containers are also present.

5. Most of the artifacts in the Service collections are cleaned, and all are sorted by material class, but only 65 percent are labeled.

6. Paper records associated with the Service collections from the Southeast Region are curated in acidic secondary containers.

7. Photographic records associated with the Service collections are curated in archival and non-archival protectors and acidic secondary containers.

8. There are no UV filters on lights in the repository.

Recommendations

1. Replace asbestos counter tops.

2. Install an appropriate fire-suppression system in the collections storage area.

3. Rebag and rebox all collections into four-mil, zip-lock, polyethylene bags and acid-free boxes. Interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be lettered in india ink and included in each polyethylene bag.

4. Label the exterior of all primary containers with permanent acid-free labels inserted in plastic sleeves.

5. Completely clean all artifacts and label them with india ink and a cover medium.

6. Repackage all associated documentation in archival containers.

7. Install UV filters on all lights.

Office of Archaeological Services, University of Alabama Museums

Moundville, Alabama

Repository Summary

Volume of Artifact Collections: 34.25 ft³

Compliance Status: Collections will require partial rehabilitation to comply with existing federal guidelines and standards for curation.

Linear Feet of Records: 1.81 linear feet

Compliance Status: Records will require some rehabilitation to comply with existing federal guidelines and standards for archival preservation.

Human Skeletal Remains: There are no human skeletal remains in collections curated at the

University of Alabama for the U.S. Fish and Wildlife Service, Southeast Region.

Status of Curation Funding: Funding is inadequate. The museum is financed through cultural resource management projects and the University of Alabama Museums. To meet curation responsibilities, the staff asserts that the museum needs additional full-time, graduate-level collections personnel and an objects conservator. Funding to meet these needs would be in the \$60,000–\$70,000 per year range.

Date of Visit: October 25–28, 1994

Point of Contact: Eugene Futato, Senior Archaeologist and Curator of Archaeological Collections

Approximately 34 ft³ of prehistoric and historical-period cultural materials and 2 linear feet of associated documentation from archaeological projects funded by the U.S. Fish and Wildlife Service, Southeast Region, are curated in two buildings at the David L. DeJarnette Archaeological Research Center, Office of Archaeological Services (OAS). The center is administered by the University of Alabama Museums (UAM), Moundville. Accessioned collections (82% of the Service's collections), which are housed at

the Erskine Ramsay Archaeological Repository, include archaeological materials from Alligator River NWR (Accession Numbers A993.14–.18, .20, .22–.24, .28, and .30–.32), Banks Lake NWR (A993.37), Harris Neck NWR (A985.27), Noxubee NWR (A988.11), Pee Dee NWR (A993.25), Pelican Island NWR (A988.11), Pinckney Island NWR (A985.27–.28), and St. Marks NWR (A988.11). Unaccessioned collections (18% of the Service's collections), which are housed at the David L. DeJarnette Laboratory of Archaeology, include archaeological materials from Choctaw NWR and Wheeler NWR. After the collections have been inventoried, they will be transferred to the Erskine Ramsay Archaeological Repository. See Table 9 for an estimate of the different material classes examined.

Table 9.
Summary of Material Classes at the
David L. DeJarnette Archaeological Research Center, by Percentage

Refuge	Prehistoric						Historical-Period			
	Ceramics	Lithics	Fauna	Shell	¹⁴ C	Other	Ceramics	Glass	Metal	Other
Alligator River	10	—	—	—	—	—	1	4	35	50
Banks Lake	6	30	—	—	—	37	1	5	15	6
Choctaw	24	75	1	—	—	—	—	—	—	—
Harris Neck	32	11	8	8	3	10	8	7	6	7
Noxubee	80	10	10	—	—	—	—	—	—	—
Pee Dee	—	100	—	—	—	—	—	—	—	—
Pelican Island	5	11	1	80	2	—	—	—	1	—
Pinckney Island	32	6	1	5	1	—	15	19	8	13
St. Marks	—	40	—	50	9	—	—	—	1	—
Wheeler ^a	1	98	1	—	—	—	—	—	—	—
All refuges	19	38	2	14	1	5	3	4	6	8

^a Ownership of these materials is disputed.

All 28 ft³ of the cultural materials curated in the Erskine Ramsay Archaeological Repository were examined by the assessment team (Table 10). Five cubic feet of cultural materials possibly from Wheeler NWR, examined in the David L. DeJarnette Laboratory of Archaeology, represent a sample from the Wheeler Survey, a project performed by personnel from the Office of Archaeological Services for the Tennessee Valley Authority (TVA).

The sites located during the Wheeler Survey are on lands whose ownership is disputed by the Service and the TVA. The curator of archaeological collections allowed the inspection team access to only a small portion of the survey materials in the absence of specific land-ownership documentation.

Assessment of the Erskine Ramsay Archaeological Repository

The Erskine Ramsay Archaeological Repository is located about 15 miles south of the University of Alabama campus at the David L. DeJarnette Archaeological Research Center at Mound State

Monument, Moundville (Figure 22). The repository comprises three floors and curates accessioned archaeological collections from the Service's Southeast Region. The collections storage area is 8,718 ft². The first floor is divided into five rooms that function as (1) a collections storage area for south Alabama archaeological materials, (2) a map and photographic materials curation area, (3) an archive, (4) a rest room, and (5) a mechanical room housing an HVAC system that maintains part of the building. The HVAC system that maintains the remainder of the building is located in a room attached to the back of the building. The second story, or mezzanine, is used as a collections storage area for the Alabama portion of the Tennessee Valley and east-central Alabama. The third floor houses the special-collections facility and collections from west Alabama and other states. Accessioned archaeological collections from the Service are curated on the third floor.

Structural Adequacy

This building was constructed in 1949 and remodeled in 1984. It consists of a concrete-slab foundation, reinforced concrete-block walls, and an asphalt-shingle roof. The interior walls of the

Table 10.
Summary of Archaeological Collections at the
David L. DeJarnette Archaeological Research Center

State/Refuge	Site	Box Number^a	Volume (ft³)
Alabama			
Choctaw NWR	CW 6-18	29	1
Wheeler NWR ^b	1LI64; 1MG109	30	1
	Quad Site, Dice C. Hubbert	31	1
	Quad Site, C. Hubbert	32	1
	1LI37, -44, -64; 1MG84-90, -93-94, -98, -101-102	33	1
	Wheeler Survey	34	1
Florida			
Pelican Island NWR	8IR49-50	1	1
	8IR49-50	2	0.5
	8IR49	4	1
	8IR49	5	1
St. Marks NWR	St. Marks NWR, Fee Station	2	0.5
Georgia			
Banks Lake NWR	9LN7	22	1
Harris Neck NWR	9MCI41	6	1
	9MCI41	7	1
	9MCI41	8	1
	9MCI41	9	1
	9MCI41	10	1
	9MCI41	11	1
	9MCI41	12	1
	9MCI41	13	1
	9MCI41	14	1
	9MCI41	15	0.25
Mississippi			
Noxubee NWR	22NO554, -557	3	1
North Carolina			
Alligator River NWR	31DR69, -71, -72	21	1
Pee Dee NWR	31AN101-114	25	1
	31AN92-100	26	1
	31AN115-122; 31RH28, -198-207	27	1
	31RH208-217	28	1

continued on next page

Table 10 (continued.)

State/Refuge	Site	Box Number ^a	Volume (ft ³)
South Carolina			
Pinckney Island NWR	38BU93-94, -180-181	15	1
	38BU66	16	1
	38BU69, -72, -180-181, -183-184, -189, -193, -204-205, -208, -213	17	1
	38BU166-169, -171, -173-177, -180, -188-189, -193-196, -200, -203-205, -207-208, -210, -212-213, -215-217	18	1
	3BU66, -189, -191-193, -196	19	1
	38BUI67	20	1
	Provenience 1, surface	23	1
	Provenience 1, surface	24	1
Total			34.25

Note: Information on both repositories is combined in this table.

^a Box number assigned by St. Louis District personnel for field-analysis purposes.

^b Ownership of these materials is disputed.



Figure 22. Exterior, Erskine Ramsay Archaeological Repository, David L. DeJarnette Archaeological Research Center.

collections storage area are insulated plywood, and the interior walls of the photographic, archive, and special-collections rooms are insulated plasterboard. There are no windows, and there are steel exterior doors on the north and west walls. The photographic, archive, and special-collections rooms have asbestos-core, steel fire doors.

The first floor is poured concrete, covered with asphalt tile in the photographic and archive rooms. The second and third floors are constructed of sealed plywood over a treated structural wood framework. Walls in the special-collections room are insulated with one-inch-thick styrofoam, and the ceiling is insulated with fiberglass batting with an R-19 value. Plumbing and electricity were renovated in 1984. There are exposed sprinkler-system pipes in the collections storage area. This system has never leaked. Each floor is capable of curating over 5,000 1-ft³ storage boxes. The repository is at 30 percent capacity. The building is structurally sound and functions well as a collections storage facility.

Environmental Controls

Temperature and humidity levels are monitored continuously in the collections storage areas by a recording hygro-thermograph, and satisfactory levels are maintained. There is a separate climate-control system for the archive, photographic storage, and special-collections rooms. Temperature levels are maintained at 65°F with a mean fluctuation of plus or minus 5°. Humidity levels in the collections storage areas are maintained at 65 percent with a mean fluctuation of plus or minus 4 percent and at 55 percent with a mean fluctuation of 4 percent in the archive. Heating and cooling ducts service all floors. Lighting consists of unfiltered fluorescent tubes, except in the archives and photographic rooms, which have UV filters. There are no windows in the repository, thus reducing the effects of UV radiation. Dust filters are included in the HVAC system.

Pest Management

There is no integrated pest-management program in this repository, but there is no evidence of infestation by insects or rodents.

Security

There are intrusion alarms on the north- and west-facing exterior doors and on the west-facing interior door. Intrusion alarms are connected to the repository's alarm system and to the local police station by telephone lines. Motion detectors are located on each floor of the repository. All doors are equipped with key locks. Twenty-four-hour security protection is provided by the assistant director/director of OAS and the office manager, who reside on the David L. DeJarnette Archaeological Research Center grounds. The curator for archaeological collections and the office manager are the only personnel with keys to the collections repository, and the Moundville Police Department patrols the grounds regularly after dark. All of the requirements for the security of federal collections are met by this repository.

Fire Detection and Suppression

Gas and smoke detectors and fire alarms are connected to the Moundville Fire Department. There are fire extinguishers with up-to-date inspection tags, a sprinkler system, and a fire hydrant to aid fire suppression. All interior doors are four-hour-rated fire doors. The building is not fireproof, but all federal fire safety precautions are observed by this repository.

Artifact Storage

Storage Units

Collections from the Service are stored in boxes on shelving units with a painted steel superstructure and sealed wooden shelves. These shelving units were built as freestanding units and the flooring added around them. There are 144 shelving units, each measuring 6.6 x 3.4 x 6.2 feet (w x d x h) and capable of holding 15,000 1-ft³ boxes stacked four high. There are different

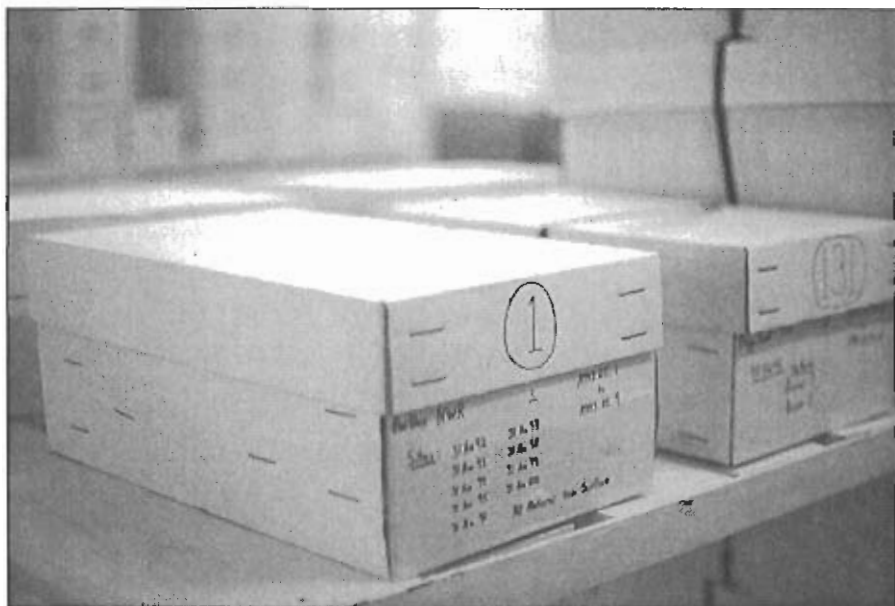


Figure 23. Primary containers holding U.S. Fish and Wildlife Service materials, Erskine Ramsay Archaeological Repository, David L. DeJarnette Archaeological Research Center.

shelving units in the special-collections room, but no Service collections are stored there.

Primary Containers

Archaeological collections from the Service are curated in 25 19.25-x-12-x-8-inch stapled, acid-free-cardboard Hollinger boxes with telescoping lids and two archival-quality cardboard boxes with telescoping lids of the same dimensions and construction (Figure 23). Boxes are bound with plastic strapping for added security. Each time a box is opened, a record is made of who opened and resealed the box and the dates. One extremely fragile ceramic vessel is carefully enclosed in a padded, 12-inch-diameter x 18-inch-high (5-gallon) plastic pail with a sealed lid for support and protection.

Secondary Containers

Fifty-four percent of the secondary containers used for Service archaeological collections from the Southeast Region are paper bags, 44 percent are plastic zip-lock bags, and two percent are aluminum foil and film canisters. The containers are directly labeled in marker with the site numbers, proveniences, accession numbers, and catalog numbers.

Laboratory Processing and Labeling

Ninety-one percent of the Service collections in this repository are cleaned, 38 percent are labeled, and 62 percent are sorted by material class.

Human Skeletal Remains

No human skeletal remains are associated with collections from the Service.

Assessment of the David L. DeJarnette Laboratory of Archaeology

The David L. DeJarnette Laboratory of Archaeology is also located at the David L. DeJarnette Archaeological Research Center. The laboratory consists of a one-story, 12,000-ft² building divided into three sections: (1) a 4,000-ft² archaeological laboratory, (2) a 4,600-ft² office complex, and (3) a 3,400-ft² collections curation storage room where collections are processed and analyzed. The office complex is divided

into administrative and project offices, a dark-room, a drafting room, an equipment-storage room, a computer room, a word-processing room, a rest room, and a library.

Structural Adequacy

The David L. DeJarnette Laboratory of Archaeology was built in 1980. It has a concrete foundation and a reinforced steel frame with corrugated metal exterior walls and roof. The floor is covered with tiles in the office complex and laboratory area. The exterior and interior walls are insulated, and interior walls in the laboratory and active collections curation area are covered with plastic sheeting. The interior walls of the office complex are framed and covered with plasterboard. There are no windows, and all interior doors are made of wood. Two exterior single steel doors are located on the east side of the building, and two exterior double steel doors and one steel loading-dock door are located on the west side of the building. The plumbing and electricity were renovated in 1986–1987. This building serves its various functions adequately.

Environmental Controls

There is an HVAC system for each of the three sections of this repository. Satisfactory levels of temperature and humidity are achieved. There are dust filters in each system. Lighting consists of unfiltered fluorescent tubes.

Pest Management

The integrated pest-management program in this repository is maintained by a professional exterminator on a monthly basis.

Security

All exterior doors are equipped with intrusion alarms connected to the Moundville Police Department, and motion detectors are installed in all sections of the repository. All exterior doors are secured with key locks and, except for the main entrance, interior padlocks. Resident

staff members provide 24-hour surveillance, and the grounds are regularly patrolled by the Moundville Police Department at night. All of the requirements for the security of federal collections are met by this repository.

Fire Detection and Suppression

There are smoke and gas detectors and fire alarms connected to the Moundville Fire Department. Fire extinguishers with up-to-date inspection tags and a fire hydrant are provided to aid fire suppression.

Artifact Storage

Storage Units

Unaccessioned and uninventoried archaeological collections from the Service's Southeast Region are stored on enameled steel shelving units measuring 3 x 2 x 8 feet (w x d x h).

Primary Containers

Archaeological collections belonging to the Service are temporarily stored in six stapled, 19.25-x-12-x-8-inch archival-quality cardboard boxes with telescoping lids. The boxes were not secured with strapping, and their condition was inferior to that of boxes in the Erskine Ramsay Archaeological Repository. These boxes are used for transport from the field to the repository. As part of the processing, all secondary containers are removed from these boxes, and cultural materials are cleaned, cataloged, and repackaged prior to curation in the Erskine Ramsay Archaeological Repository. The collections in this repository were being processed at the time of the team's visit.

Secondary Containers

Ninety percent of the secondary containers used for archaeological collections from the Service are paper bags, and 10 percent are plastic zip-lock bags. As in the Erskine Ramsay Archaeological Repository, the bags are directly labeled in marker with site number, provenience, accession number, and catalog numbers.

Laboratory Processing and Labeling

Ninety-nine percent of the Service collections in this repository are cleaned, 38 percent are labeled, and 95 percent are sorted by material class.

Assessment of Both Repositories

Records Storage

Documentation associated with collections housed at the David L. DeJarnette Archaeological Research Center (Table 11) for the Service is stored at the Erskine Ramsay Archaeological Repository and the David L. DeJarnette Laboratory of Archaeology. Materials at both repositories will be summarized in this section.

Paper Records

Accessioned paper records are curated in an environmentally controlled room in the Erskine Ramsay Archaeological Repository, designed specifically for this purpose. All original records are stored in acid-free boxes with telescoping lids. Documentation is organized by project, site

number, or both, and is enclosed in archival folders. All boxes are directly labeled in black marker as to box number, project name, site number, accession number, and folder number. Labels on folders include accession number, folder number, and contents. The paper records associated with collections from the Service include background, excavation and analysis records, and maps. They are sorted according to refuge and type of record. The primary container is an acid-free archive box curated in the records room. All records are in good condition. Boxes are secured with strapping. No paper records associated with Service refuges in the Southeast Region are stored at the David L. DeJarnette Laboratory of Archaeology.

Photographic Records

Accessioned photographic records are curated in an environmentally controlled room in the Erskine Ramsay Archaeological Repository. The photographic records associated with Service collections from the Southeast Region include black-and-white prints, contact sheets, negatives, and slides that are currently being processed for archival curation (see Table 11). All negatives and slides are curated in a metal file cabinet in archival-quality, hanging polyethylene sleeves. Sleeves are hand labeled in indelible ink or have

Table 11.
Summary of Associated Documentation at the
David L. DeJarnette Archaeological Research Center

Refuge	Paper Records (Linear Feet)	Photographic Records ^a	Reports
Alligator River	0.01	none	1
Banks Lake	0.2	129 negatives, 33 slides	2
Choctaw	—	—	4
Harris Neck	0.7	few rolls of slides and negatives	2
Pee Dee	0.5	few rolls	1
Pelican Island	0.4	few rolls	1
Pinckney Island	—	—	1
Wheeler	—	—	3
Total	1.81		15

^aApproximate numbers only; photographic material is being processed.

typed labels affixed to them. Label information includes accession number, project name, and slide or negative number. File cabinets are labeled directly in marker with drawer numbers and types of material. Some contact prints also are filed by collection in three-ring binders and are stored in the library located in the David L. DeJarnette Laboratory of Archaeology.

Project Reports

Fifteen project reports documenting collections from the Southeast Region are curated in the library located in the David L. DeJarnette Laboratory of Archaeology. Another six reports referred to in the National Park Service's National Archeological Database (NADB) search were not available for examination at this repository.

Collections-Management Standards

Registration Procedures

Accession Files

Specific forms must be completed to be issued an accession number. The forms contain the information requisite to entering the data in the Archaeological Collections Database, which is updated on a monthly basis.

Location Identification

Location information is included in the specimen and records inventories and the negative and transparency indexes.

Cross-Indexed Files

Files are cross-indexed by agency, accession numbers, and site numbers.

Published Guide to Collections

There is no published guide to Service collections in this repository.

Site-Record Administration

The Smithsonian trinomial site-numbering system is used, and records are organized by state and site number.

Computerized Database Management

The University of Alabama is the state coordinating office for the NADB. There are database files for specimens, and associated paper and photographic documentation. Official Alabama state archaeological site files also are maintained by OAS.

Written Policies and Procedures

Minimum Standards for Acceptance

It is required that the collection be complete with all specimens and associated documentation. The condition of the collection affects the curation fee.

Curation Policy

There is a curation policy, but it has not been integrated into one document.

Records-Management Policy

The information is readily available, but has not been integrated into a single document.

Field-Curation Procedures

There are no field-curation procedures.

Loan Policy

The majority of loans are granted to researchers affiliated with qualified institutions, but exceptions are made according to the staff's appraisal of the borrower's expertise and ethical standards. There is a requirement of a letter stating the purpose of the loan. A standard loan form must be completed by the borrower. This form includes: the borrower's name, loan number, purpose of the loan, location of the research, loan date, and duration. The form contains an inventory of the specimens included and conditions of the loan.

Deaccessioning Policy

Nothing has been deaccessioned to date, and no such plans are anticipated in the future.

Inventory Policy

An annual inventory is performed.

Latest Collection Inventory

The collections in the Erskine Ramsay Archaeological Repository were inventoried in 1994. Cultural materials in the David L. DeJarnette Laboratory of Archaeology will be inventoried when reboxed prior to curation in the Erskine Ramsay Archaeological Repository.

Curation Personnel

Eugene Futato is the full-time curator of archaeological collections, and Robert Huffman is the archaeological collections manager. Mr. Futato holds an M.A. in anthropology. Mr. Huffman has degrees in English and French and has acquired expertise in collections management through extensive experience. Students and regular employees are assigned curation duties on an as-needed basis.

Curation Financing

Funding is inadequate for both repositories. The museum is financed through cultural resource management projects and UAM. To meet curation responsibilities, the staff asserts that the museum needs additional full-time, graduate-level collections personnel and an objects conservator. Funding to meet these needs would be in the \$60,000–\$70,000 per year range.

Access to Collections

Access to collections at both repositories is controlled by the curator of archaeological collections and the collections manager. The curator of archaeological collections and the office manager have keys to the repositories. Other staff members have access through the curator of archaeological collections.

Future Plans

According to curatorial personnel, maintenance of the collections is their main responsibility. A committee at UAM is reviewing the curatorial procedures at the David L. DeJarnette Laboratory of Archaeology. These procedures include NAGPRA and ownership of specific collections

to determine possibilities for future curation funding.

Comments

1. The David L. DeJarnette Laboratory of Archaeology meets all federal security and environmental controls requirements.
2. Labels on all boxes are written directly on the ends of the boxes. This is not an archival procedure.
3. Boxes are overstacked in the Erskine Ramsay Archaeological Repository.
4. Ownership of the Wheeler NWR collections has not been determined.
5. Photographic documentation has not been completely processed.
6. OAS opens and inspects a sample of the primary containers each year, even if they have not been otherwise opened that year.

Recommendations

1. Apply adhesive polyethylene label holders, with acid-free paper labels, to each box.
2. Limit overstacking in the Erskine Ramsay Archaeological Repository, or add more shelves to existing units to reduce the risk of box compression.
3. Inspect contents of each box annually whether or not box strapping is removed.
4. Rebag and rebox all collections into four-mil, zip-lock, polyethylene bags and acid-free boxes. Interior labels made from spun-bonded, polyethylene paper (e.g., Nalgene polypaper) should be

lettered in india ink and included in each poly-ethylene bag.

5. Determine ownership of the Wheeler NWR collection.

6. Process all photographic documentation.

7. Clean, label, and sort by material class the remainder of the collection from the Service.

8

Summary

Seven separate repositories at five facilities in Alabama, Arkansas, and Tennessee curate archaeological collections from the U.S. Fish and Wildlife Service, Southeast Region (Table 12). Each of these facilities and their repositories were visited by the assessment team. At the time of the assessment, 21 Service collections were located. A building evaluation, survey questionnaire, and collections and documentation evaluation were completed for each repository.

Infrastructure Controls

Of the five facilities, only the Pinson Mounds Museum and the David L. DeJarnette Laboratory of Archaeology provide the curational infrastructure required for long-term collection storage. Both of these repositories exhibit adequate environmental-control, pest-management, security, and fire-control measures, and each has a full-time curatorial staff. Among other

Table 12.
Summary of Collections by Location

Location	Cubic Feet of Artifacts	Linear Feet of Documentation	Human Skeletal Remains
AASSM ^a	102.00	5.00	13 ^b
Nash Museum ^c	7.44	0.25	0
TDOA Nashville ^d	11.28	0.79	0
TDOA Pinson ^e	41.00	0.92	2 ^b
Moundville ^f	34.25	1.81	0
Total	195.97	8.77	15 ^b

^a Arkansas Archeological Survey Station, Magnolia.

^b Minimum number of individuals represented by the skeletal collection.

^c Charles H. Nash Museum, Memphis.

^d Division of Archaeology Headquarters, Tennessee Department of Conservation, Nashville.

^e Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

^f David L. DeJarnette Archaeological Research Center, Office of Archaeological Services.

repositories, security and fire control were generally lacking or inadequate, and one repository, Graham Hall, Room 302, Southern Arkansas University, meets none of the minimum requirements for facilities curating federal archaeological collections.

Environmental Controls

Environmental monitoring and control systems that meet the requirements of 36 CFR Part 79 are present in five of the seven repositories examined (Table 13). A sixth repository, Magale Library, Room 116, Southern Arkansas University, has an HVAC system for environmental control but no environmental monitoring system. Graham Hall, Room 302, Southern Arkansas University, lacks any type of environmental monitoring and control system. All repositories lacked UV filters on interior lights. In Graham Hall, Southern Arkansas University, primary containers and shelving materials exhibit UV damage from sunlight that enters through an unshaded east-facing window.

Pest Management

Five out of seven repositories reported having integrated pest-management programs that include both periodic monitoring and prevention measures. Pest damage to collection materials was observed only at one repository, Graham Hall, Southern Arkansas University, where insect damage was noted on some secondary-container labels.

Security

Adequate security systems are lacking at four of the seven repositories visited. Only the repositories at Southern Arkansas University have no security measures for the collections storage areas other than locked doors and periodic patrols by security personnel or observation by nearby residents. Only the Pinson Mounds Museum and the two repositories at the University of Alabama have storage area security systems that included intrusion alarms and motion detectors (see Table 13).

Table 13.
Presence or Absence of Repository Infrastructure Controls

Location	Environmental Controls	Pest Management	Security	Fire Control	Full-Time Curator
AASSM ^a					
Graham Hall, Room 302					X
Magale Library, Room 116	X	X			X
Nash Museum ^b	X	X			
TDOA Nashville ^c					
TDOA Pinson ^d	X	X	X		X
Moundville ^e					
Erskine Ramsay Archaeological Repository	X	X	X	X	X
David L. DeJarnette Laboratory of Archaeology	X	X	X	X	X

^a Arkansas Archeological Survey Station, Magnolia.

^b Charles H. Nash Museum, Memphis.

^c Division of Archaeology Headquarters, Tennessee Department of Conservation, Nashville. Note that this is not a curation facility; all materials go to Pinson for long-term curation.

^d Central Curation Facility, Division of Archaeology, Tennessee Department of Conservation, Pinson Mounds Museum, Pinson Mounds State Archaeological Area.

^e David L. DeJarnette Archaeological Research Center, Office of Archaeological Services.

Fire Detection and Suppression

Adequate fire-detection and -suppression systems are also lacking at five of the seven repositories. Magale Library, at Southern Arkansas University, has up-to-date fire extinguishers in the collection storage area but no sprinkler system, smoke detectors, or fire alarms. Graham Hall, also at Southern Arkansas University, has no fire-safety system within the collections storage area. The repositories at Charles H. Nash Museum of Archaeology and the Tennessee Department of Conservation are equipped with fire extinguishers but do not have adequate smoke- and fire-detection systems in place. The repository at the Pinson Mounds Museum and the two repositories at the University of Alabama each meet the fire-safety requirements stipulated by 36 CFR Part 79.

Artifact Curation

Nonarchival-quality storage practices were observed at all repositories. At the David L. DeJarnette Archaeological Research Center, Office of Archaeological Services, University of Alabama Museums, collections are stored in nonacidic cardboard primary containers, although some containers are of an inferior quality. In each of the other repositories, collections were observed to be stored in acidic cardboard primary containers and often with acidic secondary paper containers and acidic paper labeling. In the two repositories at Southern Arkansas University, artifact storage boxes were often stacked from two to eight boxes deep, which could result in compression and damage to some artifacts.

Human Skeletal Remains

Human skeletal remains are present in Service collections located at Southern Arkansas

University and Pinson Mounds Museum. These remains represent a minimum of 15 individuals. The skeletal remains from at least 13 individuals that are located at Southern Arkansas University are scheduled to be sent to the Arkansas Archeological Survey Headquarters in Fayetteville, Arkansas. One associated funerary object is included in the Pinson Mounds Museum collection.

Records Management

Approximately 8.77 linear feet of records associated with the archaeological collections of the Service's Southeast Region are housed primarily at Southern Arkansas University (5 linear feet) and the David L. DeJarnette Archaeological Research Center, Office of Archaeological Services (2 ft³), with lesser quantities located at the remaining facilities.

Portions of the project documentation are beginning to deteriorate. Pages are discolored because of the use of acidic paper. None of the documentation has been preserved on archival-quality paper, and no security copies exist. Failure to implement archival protocols will lead to continued deterioration of the documentation and a loss of the information that they contain.

Collections-Management Standards

Some basic management tools (e.g., accession records; inventories; and written policies and procedures for curation, records management, and loans) are present at each location. Although all repositories maintain some system for recording accession information and many also maintain a database of their collections, specific written policies for repository procedures are generally lacking.

General Recommendations

We offer the following recommendations to bring the collections of the U.S. Fish and Wildlife Service, Southeast Region, into compliance with 36 CFR Part 79.

Develop a Plan of Action

A plan of action for archaeological materials must minimally address (1) long-term housing of the collections, (2) rehabilitation of artifacts, (3) rehabilitation of the associated records, and (4) management of these data.

Bring Collections Together

In this era of cost-efficiency measures, the St. Louis District recommends bringing collections together in one regionally based repository for the curation and long-term management of archaeological collections. Funds may be required for capital improvements to the facility to meet federal curation standards.

Develop Cooperative Agreements

To ensure the professional curation of its archaeological collections, the Service should develop cooperative agreements with repositories for long-term curation.

Dedicate Space for Storage of Collections

Minimal curation standards in a repository must include the following five points.

1. Temperature and humidity in storage spaces should be maintained at levels specifically appropriate for the types of objects being curated.
2. The number of exterior walls, windows, and doors in storage spaces should be minimized in order to (a) decrease the chance of condensation on walls and windows during seasonal temperature changes, (b) enhance security, and (c) increase energy efficiency.
3. Water lines associated with fire-suppression systems are the only kind of overhead pipes allowed in a collections storage area. Water pipes and sewer pipes should be removed.
4. Electrical junction boxes and gas and electric meters should be outside the collections storage area in order to limit access by noncuratorial staff.
5. Storage areas should be large enough to accommodate existing collections as well as projected growth needs.

Maintain Systems for Security, Fire Detection and Suppression, and Maintenance

A collections facility must maintain systems for the security, fire protection, and maintenance of the collections storage area that minimally incorporate the following.

Security

Entrances to collections storage areas should have metal or solid-core wooden doors. Doors should have dead-bolt and key locks, and the storage area should be protected by an electronic intrusion-detection system. Keys to the storage area must be restricted to repository personnel. All cabinets with archaeological collections should be kept locked, unless items are being used for research. Researchers and visitors should not be allowed access to the collections storage area unless accompanied by curatorial staff. When researchers and/or visitors request to work with objects, it is best that the objects be taken to an area separate and outside the collections storage area.

Fire Detection and Suppression

Fire-detection and -suppression systems must be installed to safeguard collections and personnel. Smoke detectors and fire extinguishers matched to the types of materials that might catch fire must be placed in all parts of the collections storage area. Fire extinguishers must be properly maintained and placed in clearly marked positions. Sprinkler systems should also be installed.

Maintenance of Facility

A scheduled plan for maintenance that includes routine sweeping, mopping, and dusting by curatorial staff or bonded janitorial service must be established in the collections storage area. In addition, an integrated pest-management program, which includes regular monitoring for signs of

pest infestation, must be implemented. Smoking, eating, and drinking should be forbidden in the collections storage area.

Inventory and Rehabilitate Existing Artifact Collections

The physical condition of all artifacts should be inspected. A treatment priority should be assigned to all artifacts so that those needing immediate treatment are rehabilitated first. A general inventory must be produced. Rehabilitation must include the following.

1. Inventory and catalog all artifact collections to a standard consistent with those of a professional museum.
2. Label and package artifacts to one consistent standard, and place them in archivally stable containers.
3. Conduct a condition assessment using curation professionals of all perishable artifacts.
4. Implement a long-term conservation program.
5. Develop a collections manual to aid in the management of collections.

These steps will result in the stabilization and preservation of existing collections and will ensure their management in the most cost-efficient manner for the federal taxpayer. Proper management of these collections will ensure that scholars, students, and the public have access to, and benefit from, the archaeological collections belonging to the Service, which currently do not approach their potential for use.

Develop a Formal Archives-Management Program

A plan of action for the archives must be developed immediately to establish archives-

deficiency priorities within the repositories that contain Service records. Following the survey, all records must be brought together and rehabilitated to comply with existing federal guidelines and standards for modern archival practices. Archives rehabilitation includes eight steps.

1. Develop an archives inventory management program that uses microcomputer technology.
2. Inventory and catalog all associated records to professional museum standards.
3. Using professional staff, conduct a condition assessment of all records, and implement a long-term conservation program for appropriate records.
4. Conserve significant records that are currently at risk.
5. Transfer general records into acid-free folders and appropriate archival storage units.
6. Place photographs, negatives, and slides into archival, polyethylene sleeves, acid-free envelopes, and appropriate storage units.
7. Catalog and curate large-scale maps in metal map cases.
8. Produce duplicate/backup copies of associated records that will be stored in a separate location.

Proper management of the Service archaeological archives for the Southeast Region will provide opportunities for scholars, students, and the public to benefit from the information contained in these records, a major public benefit that currently is not being realized.

Hire a Full-Time Manager for Archaeological Collections

It is imperative that a collections manager be hired to care for the archaeological collections.

This person should have professional qualifications and prior experience in collections management. Collections managers minimally perform the following tasks.

1. Ensure that adequate written policies and procedures are in place and are shared so that staff have appropriate guidance.
2. Ensure that management records are kept up to date, complete, properly monitored, and readily available to researchers.
3. Manage a computerized database.
4. Ensure that artifacts can be located easily.
5. Ensure that objects are labeled properly.
6. Ensure that the artifacts and records are maintained under physically secure conditions, whether in storage, on exhibit, or under study.
7. Perform periodic inventories and inspections of collections and records to ensure their long-term survival.

The St. Louis District regards all the aforementioned recommendations as the minimal requirement that must be addressed in order to bring Service collections from the Southeast Region into compliance with federal standards on archaeological curation.

Specific Recommendations for the U.S. Fish and Wildlife Service, Southeast Region

The following specific recommendations are proposed to address issues identified during the St. Louis District inspection of Southeast Region archaeological collections and repositories.

1. Bring together all collections and associated documentation for the Service's Southeast Region (the most likely repository is the David L. DeJarnette Archaeological Research Center).

2. Obtain copies of all archaeological reports, manuscripts, and other documentation and curate them at Moundville.
3. Retain acid-free copies of all reports, manuscripts, and other documentation at regional headquarters.
4. Curate an acid-free copy of the database and machine-readable records at Moundville and regional headquarters.
5. Determine ownership of the Wheeler NWR archaeological collections.
6. Determine the specific locations of all collections identified by the database, but which were not examined during this curation-needs assessment.

In order to comply with the mandates of NAGPRA and 36 CFR Part 79, the St. Louis District recommends that the following general actions be taken:

1. Determine the specific locations of all collections identified by the database, specifically identifying collections with NAGPRA-related materials.
2. Physically assess all collections in order to address the requirements of 36 CFR Part 79 and to locate any NAGPRA-related materials not identified during the literature-review process.
3. Perform NAGPRA Section 5 inventory of all relevant materials and obtain copies of summaries and inventories already performed by the repositories enumerated here.

If implemented, these general recommendations would permit the Service to address the federal requirements for the long-term curation of archaeological materials. By adopting this strategy, the Service has the opportunity to implement a curation program that will serve its needs well into the future.